SANTA CRUZ BIOTECHNOLOGY, INC.

PYGB (B-5): sc-518267

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glycolysis is an evolutionarily conserved series of ten chemical reactions that utilizes eleven enzymes to concomitantly generate pyruvate and ATP from glucose. Phospho-fructose kinase-2/fructose 2,6-bisphosphatase (PFK-2) stimulates the synthesis and degradation of fructose 2,6-bisphosphate. Glycogen phosphorylase (also known as GP) is an allosteric enzyme important in carbohydrate metabolism. Its activity is regulated through either noncovalent binding of metabolites or by covalent modification. Glycogen phosphorylase catalyzes the phosphorylation of glycogen to Glc-1-P. There are three genes which encode the brain, liver and muscle forms of glycogen phosphorylase, PYGB, PYGL and PYGM. Because of its fundamental role in the metabolism of glycogen, glycogen phosphorylase has been a target for the design of inhibitory compounds, which could be valuable in the therapeutic treatment of type 2 diabetes mellitus.

REFERENCES

1. Clark, A.J. 1991. rec genes and homologous recombination proteins in *Escherichia coli*. Biochimie 73: 523-532.
2. Madiraju, M.V., et al. 1991. Effect of RecF protein on reactions catalyzed by RecA protein. Nucleic Acids Res. 19: 6295-6300.
3. Boldt, J., et al. 1996. Can clonidine, enoximone, and enalaprilat help to protect the myocardium ischaemia in cardiac surgery? Heart 76: 207-213.
4. Krause, E.G., et al. 1996. Glycogen phosphorylase isoenzyme BB in diagnosis of myocardial ischaemic injury and infarction. Mol. Cell. Biochem. 160-161: 289-295.
5. Mair, J. 1997. Progress in myocardial damage detection: new biochemical markers for clinicians. Crit. Rev. Clin. Lab. Sci. 34: 1-66.
6. Mair, J. 1998. Glycogen phosphorylase isoenzyme BB to diagnose ischaemic myocardial damage. Clin. Chim. Acta 272: 79-86.

CHROMOSOMAL LOCATION

Genetic locus: PYGB (human) mapping to 20p11.21.

SOURCE

PYGB (B-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 716-744 of PYGB of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PYGB (B-5) is available conjugated to agarose (sc-518267 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518267 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518267 PE), fluorescein (sc-518267 FITC), Alexa Fluor® 488 (sc-518267 AF488), Alexa Fluor® 546 (sc-518267 AF546), Alexa Fluor® 594 (sc-518267 AF594) or Alexa Fluor® 647 (sc-518267 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518267 AF680) or Alexa Fluor® 790 (sc-518267 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

PYGB (B-5) is recommended for detection of PYGB of human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PYGB siRNA (h): sc-105403, PYGB shRNA Plasmid (h): sc-105403-SH and PYGB shRNA (h) Lentiviral Particles: sc-105403-V.

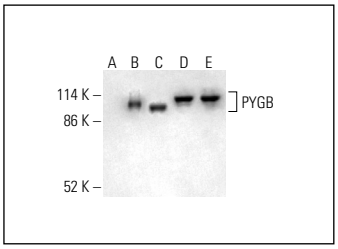
Molecular Weight of PYGB: 94 kDa.

Positive Controls: PYGB (h): 293T Lysate: sc-170275, Hep G2 cell lysate: sc-2227 or SK-MEL-24 whole cell lysate: sc-364259.

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



PYGB (B-5): sc-518267. Western blot analysis of PYGB expression in non-transfected 293T: sc-117752 (**A**), human PYGB transfected 293T: sc-170275 (**B**), Hep G2 (**C**), HT-29 (**D**) and SK-MEL-24 (**E**) whole cell lysates. Detection reagent used: m-IgG_1 BP-HRP: sc-525408.

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 for detailed protocols and support products.