SANTA CRUZ BIOTECHNOLOGY, INC.

PYGB/L/M (H-300): sc-66913

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 against ischaemia in cardiac surgery? Heart 76: 207-213.
4. Krause, E.G., et al. 1997. Glycogen phosphorylase isoenzyme BB in diagnosis of myocardial ischaemic injury and infarction. Mol. Cell. Biochem. 160-161: 289-295.

SOURCE

PYGB/L/M (H-300) is a rabbit polyclonal antibody raised against amino acids 21-320 mapping near the N-terminus of liver glycogen phosphorylase 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.

APPLICATIONS

PYGB/L/M (H-300) is recommended for detection of PYGB, PYGL and PYGM 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). PYGB/L/M (H-300) is also recommended for detection of PYGB, PYGL and PYGM in additional species, including equine, canine, bovine, porcine and avian.

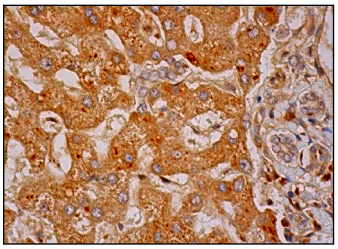
Molecular Weight of PYGB/L/M: 97 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, EOC 20 whole cell lysate: sc-364187 or Sol8 cell lysate: sc-2249.

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



PYGB/L/M (H-300): sc-66913. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic staining of hepatocytes and bile duct cells.

SELECT PRODUCT CITATIONS

1. Wu, S.Y., et al. 2009. Effect of geniposide, a hypoglycemic glucoside, on hepatic regulating enzymes in diabetic mice induced by a high-fat diet and streptozotocin. Acta Pharmacol. Sin. 30: 202-208.
2. Lv, L., et al. 2010. Effect of astragaloside IV on hepatic glucose-regulating enzymes in diabetic mice induced by a high-fat diet and streptozotocin. Phytother. Res. 24: 219-224.

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.