SANTA CRUZ BIOTECHNOLOGY, INC.

PYGB/L/M (N-20): sc-46347

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 non-covalent 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. and Clark, A.J. 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.
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.
7. Lang, K., et al. 2000. Comparison of biochemical markers for the detection of minimal myocardial injury: superior sensitivity of cardiac Troponin-T ELISA. J. Intern. Med. 247: 119-123.

SOURCE

PYGB/L/M (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of liver glycogen phosphorylase of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-46347 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

PYGB/L/M (N-20) is recommended for detection of glycogen phosphorylase liver, brain and muscle forms 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

PYGB/L/M (N-20) is also recommended for detection of PYGB, PYGL and PYGM in additional species, including equine, canine, bovine, porcine and avian.

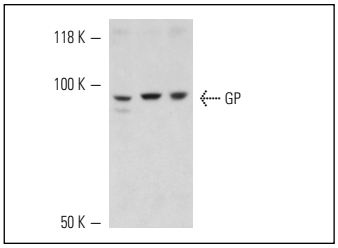
Molecular Weight of PYGB/L/M: 97 kDa.

Positive Controls: c4 whole cell lysate: sc-364186, EOC 20 whole cell lysate: sc-364187 or U-87 MG cell lysate: sc-2411.

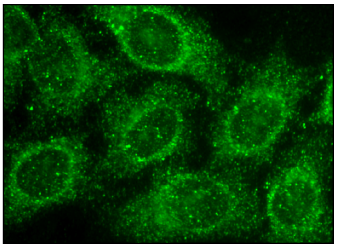
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



GP (N-20): sc-46347. Western blot analysis of GP expression in c4 (**A**), EOC 20 (**B**) and Sol8 (**C**) whole cell lysates.



PYGB/L/M (N-20): sc-46347. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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