SANTA CRUZ BIOTECHNOLOGY, INC.

G6Pase-α (H-60): sc-25840

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Glucose-6-phosphatase (G6Pase), is a multicomponent enzyme system that hydrolyzes glucose-6-phosphate (G6P) in the final step of gluconeogenesis and gluconeolysis. G6Pase localizes to the endoplasmic reticulum, and while liver, kidney, and intestine are the only tissues that express the first identified isoform, G6Pase-α, a second form, designated G6Pase-β, contributes to blood glucose homeostasis in a wider range of tissues. Glucocorticoids stimulate the expression of the G6Pase gene while Insulin rapidly inhibits expression via the thymine-rich Insulin response element located within the promoter of the G6Pase gene. Due to its necessary involvement in normal glucose metabolism, G6Pase plays an integral role in diabetes and glycogen storage diseases (GSDs). The presence of different isoforms may explain the ability of some individuals with GSDs to still produce glucose, despite their lack of functional G6Pase-α.

CHROMOSOMAL LOCATION

Genetic locus: G6PC (human) mapping to 17q21.31; G6pc (mouse) mapping to 11 D.

SOURCE

G6Pase-α (H-60) is a rabbit polyclonal antibody raised against amino acids 1-60 mapping at the N-terminus of G6Pase-α 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.

STORAGE

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

APPLICATIONS

G6Pase-α (H-60) is recommended for detection of G6Pase-α 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).

G6Pase-α (H-60) is also recommended for detection of G6Pase-α in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for G6Pase-α siRNA (h): sc-105380, G6Pase-α siRNA (m): sc-145294, G6Pase-α shRNA Plasmid (h): sc-105380-SH, G6Pase-α shRNA Plasmid (m): sc-145294-SH, G6Pase-α shRNA (h) Lentiviral Particles: sc-105380-V and G6Pase-α shRNA (m) Lentiviral Particles: sc-145294-V.

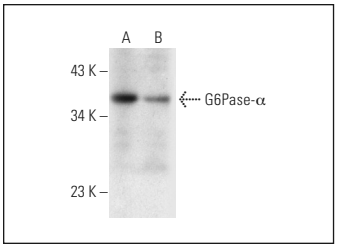
Molecular Weight of G6Pase-α: 36 kDa.

Positive Controls: rat liver extract: sc-2395 or rat kidney extract: sc-2394.

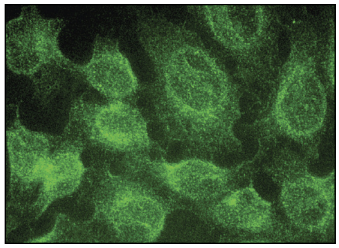
RECOMMENDED SECONDARY REAGENTS

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.

DATA



G6Pase-α (H-60): sc-25840. Western blot analysis of G6Pase-α expression in rat kidney (**A**) and rat liver (**B**) tissue extracts.



G6Pase-α (H-60): sc-25840. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Könner, A.C., et al. 2007. Insulin action in AgRP-expressing neurons is required for suppression of hepatic glucose production. Cell Metab. 5: 438-449.
2. Gong, D., et al. 2009. Quantitative proteomic profiling identifies new renal targets of copperII-selective chelation in the reversal of diabetic nephropathy in rats. Proteomics 9: 4309-4320.
3. 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.
4. Yao, X.H., et al. 2013. Prenatal ethanol exposure causes glucose intolerance with increased hepatic gluconeogenesis and histone deacetylases in adult rat offspring: reversal by tauroursodeoxycholic acid. PLoS ONE 8: e59680.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **G6Pase-α (H-4): sc-398155**, our highly recommended monoclonal alternative to G6Pase-α (H-60). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **G6Pase-α (H-4): sc-398155**.