SANTA CRUZ BIOTECHNOLOGY, INC.

H6PD (H-291): sc-67394

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

H6PD (hexose-6-phosphate dehydrogenase, GDH/6PGL endoplasmic bifunctional protein) is a 789 amino acid protein encoded by the human gene H6PD. The N-terminal section of H6PD belongs to the glucose-6-phosphate dehydrogenase family, while the C-terminal section belongs to the glucosamine/galactosamine-6-phosphate isomerase family, 6-phosphogluconolactonase subfamily. H6PD is responsible primarily for the oxidation of glucose-6-phosphate and glucose. It also oxidizes other hexose-6-phosphates as well. H6PD catalyzes the conversion of glucose 6-phosphate to 6-phosphogluconolactone within the lumen of the endoplasmic reticulum, thereby generating reduced nicotinamide adenine dinucleotide phosphate. Reduced nicotinamide adenine dinucleotide phosphate is a necessary cofactor for the reductase activity of 11β-hydroxysteroid dehydrogenase type 1, which converts hormonally inactive cortisone to active cortisol (in rodents, 11-dehydrocorticosterone to corticosterone).

CHROMOSOMAL LOCATION

Genetic locus: H6PD (human) mapping to 1p36.22; H6pd (mouse) mapping to 4 E2.

SOURCE

H6PD (H-291) is a rabbit polyclonal antibody raised against amino acids 501-791 mapping at the C-terminus of H6PD 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.

RESEARCH USE

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

APPLICATIONS

H6PD (H-291) is recommended for detection of H6PD 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). H6PD (H-291) is also recommended for detection of H6PD in additional species, including equine, canine and bovine.

Suitable for use as control antibody for H6PD siRNA (h): sc-62431, H6PD siRNA (m): sc-62432, H6PD shRNA Plasmid (h): sc-62431-SH, H6PD shRNA Plasmid (m): sc-62432-SH, H6PD shRNA (h) Lentiviral Particles: sc-62431-V and H6PD shRNA (m) Lentiviral Particles: sc-62432-V.

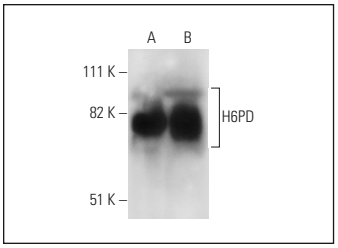
Molecular Weight of H6PD: 89 kDa.

Positive Controls: mouse liver extract: sc-2256 or rat liver extract: sc-2395.

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



H6PD (H-291): sc-67394. Western blot analysis of H6PD expression in rat liver (**A**) and mouse liver (**B**) tissue extracts.

SELECT PRODUCT CITATIONS

1. Vasiljevic, A., et al. 2013. Enhanced prereceptor glucocorticoid metabolism and lipogenesis impair Insulin signaling in the liver of fructose-fed rats. J. Nutr. Biochem. 24: 1790-1377.
2. Bursac, B.N., et al. 2014. High-fructose diet leads to visceral adiposity and hypothalamic leptin resistance in male rats-do glucocorticoids play a role? J. Nutr. Biochem. 25: 446-455.
3. Vasiljevic, A., et al. 2014. Hepatic inflammation induced by high-fructose diet is associated with altered 11βHSD1 expression in the liver of Wistar rats. Eur. J. Nutr. 53: 1393-1402.
4. Kovacevic, S., et al. 2014. Dietary fructose-related adiposity and glucocorticoid receptor function in visceral adipose tissue of female rats. Eur. J. Nutr. 53: 1409-1420.
5. Nikoli, M., et al. 2015. Possible involvement of glucocorticoids in 5α-dihydrotestosterone-induced PCOS-like metabolic disturbances in the rat visceral adipose tissue. Mol. Cell. Endocrinol. 399: 22-31.