

GPD2 (S-16): sc-161682

BACKGROUND

GPD2 (glycerol-3-phosphate dehydrogenase 2, mitochondrial), also known as GDH2 or GPDM, is a 727 amino acid protein belonging to the FAD-dependent glycerol-3-phosphate dehydrogenase family. GPD2 is involved in the conversion of glycerol-3-phosphate (G-3-P) to dihydroxyacetone phosphate (DHAP) while reducing enzyme-bound FAD. Localizing to the outer surface of the inner mitochondrial membrane, GPD2 acts in conjunction with GPD1 (a cytosolic NAD-linked GPD) to form a glycerol phosphate shuttle that ultimately results in the reoxidation of NADH formed during glycolysis. While widely expressed in adult and fetal tissue, GPD2 is found at highest levels in human pancreatic islets where it is essential for pancreatic B-cell glucose-sensory function. Decreased levels of GPD2 leads to impaired glucose-stimulated Insulin release in nonInsulin-dependent diabetes mellitus. Existing as two alternatively spliced isoforms, GPD2 contains two EF-hand domains and maps to human chromosome 2q24.1.

CHROMOSOMAL LOCATION

Genetic locus: GPD2 (human) mapping to 2q24.1; Gpd2 (mouse) mapping to 2 C1.1.

SOURCE

GPD2 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of GPD2 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.

Blocking peptide available for competition studies, sc-161682 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

GPD2 (S-16) is recommended for detection of GPD2 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); non cross-reactive with GPD1 or GPD1L.

GPD2 (S-16) is also recommended for detection of GPD2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GPD2 siRNA (h): sc-94819, GPD2 siRNA (m): sc-145685, GPD2 shRNA Plasmid (h): sc-94819-SH, GPD2 shRNA Plasmid (m): sc-145685-SH, GPD2 shRNA (h) Lentiviral Particles: sc-94819-V and GPD2 shRNA (m) Lentiviral Particles: sc-145685-V.

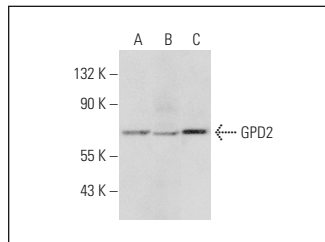
Molecular Weight of GPD2: 81 kDa.

Positive Controls: ZR-75-1 cell lysate: sc-2241, mouse liver extract: sc-2256 or mouse skeletal muscle extract: sc-364250.

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



GPD2 (S-16): sc-161682. Western blot analysis of GPD2 expression in ZR-75-1 whole cell lysate (A) and mouse liver (B) and mouse skeletal muscle (C) tissue extracts.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **GPD2 (D-12): sc-390830** or **GPD2 (D-9): sc-393620**, our highly recommended monoclonal alternatives to GPD2 (S-16).