**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.

**REFERENCES**


**CHROMOSOMAL LOCATION**

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

**SOURCE**

GPD2 (D-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 463-492 within an internal region of GPD2 of human origin.

**PRODUCT**

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390830 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

**APPLICATIONS**

GPD2 (D-12) is recommended for detection of GPD2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

GPD2 (D-12) is also recommended for detection of GPD2 in additional species, including equine, canine, bovine, porcine and avian.

**RECOMMENDED SUPPORT REAGENTS**

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-PRP (Cruz Marker); sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516124 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 with DAB, 50X: sc-24982 and Immunohistochemistry: use m-IgGκ BP-HP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto- mount: sc-45086, or Organo/Limonene Mount: sc-2414.

**DATA**

![Image](https://example.com/image1.png)

**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.