

GFAT2 (H-300): sc-134710

BACKGROUND

GFPT2 (glutamine-fructose-6-phosphate transaminase 2), also known as D-fructose-6-phosphate amidotransferase 2 or hexosephosphate aminotransferase 2, is a 682 amino acid protein and isoenzyme of GFAT1, the first and rate-limiting enzyme for the entry of glucose into the hexosamine biosynthetic pathway (HBP), which is a relatively minor branch of glycolysis. Expressed in spinal cord, heart and placenta, GFAT2 regulates glucose entry into the HBP and likely controls the availability of precursors for N- and O-linked protein glycosylation. Containing one glutamine amidotransferase type-2 domain and two SIS domains. GFAT2 is encoded by a gene that maps to human chromosome 5q35.3. GFAT2 gene variants have been linked to type 2 diabetes, diabetic nephropathy, and increased GFPT2 mRNA levels.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: GFPT2 (human) mapping to 5q35.3; *Gfpt2* (mouse) mapping to 11 B1.2.

SOURCE

GFAT2 (H-300) is a rabbit polyclonal antibody raised against amino acids 301-600 mapping within an internal region of GFAT2 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.

APPLICATIONS

GFAT2 (H-300) is recommended for detection of GFAT2 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); may cross-react with GFAT1.

GFAT2 (H-300) is also recommended for detection of GFAT2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for GFAT2 siRNA (h): sc-91875, GFAT2 siRNA (m): sc-145383, GFAT2 shRNA Plasmid (h): sc-91875-SH, GFAT2 shRNA Plasmid (m): sc-145383-SH, GFAT2 shRNA (h) Lentiviral Particles: sc-91875-V and GFAT2 shRNA (m) Lentiviral Particles: sc-145383-V.

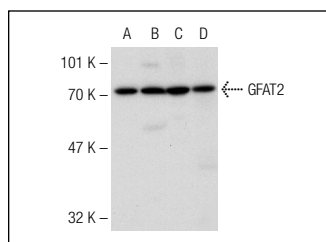
Molecular Weight of GFAT2: 77 kDa.

Positive Controls: mouse brain extract: sc-2253, HeLa whole cell lysate: sc-2200 or A549 cell lysate: sc-2413.

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



GFAT2 (H-300): sc-134710. Western blot analysis of GFAT2 expression in HeLa (A), A549 (B) and JAR (C) whole cell lysates and mouse heart tissue extract (D).

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.