

GPAM (D-10): sc-398135

BACKGROUND

GPAM (glycerol-3-phosphate acyltransferase, mitochondrial), also known as GPAT1, GPAT or KIAA1560, is an 828 amino acid multi-pass membrane protein that localizes to the outer membrane of the mitochondria and is involved in phospholipid metabolism. More specifically, GPAM functions to catalyze the first and committing step in the biosynthesis of glycerolipid, namely the conversion of Acyl-CoA and sn-glycerol 3-phosphate to CoA and 1-acyl-sn-glycerol 3-phosphate. Via its catalytic activity, GPAM plays an essential role in the regulation of cellular triacylglycerol and phospholipid levels. The gene encoding GPAM maps to human chromosome 10, which houses over 1,200 genes and comprises nearly 4.5% of the human genome. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

CHROMOSOMAL LOCATION

Genetic locus: GPAM (human) mapping to 10q25.2; Gpam (mouse) mapping to 19 D2.

SOURCE

GPAM (D-10) is a mouse monoclonal antibody raised against amino acids 69-156 mapping within an internal region of GPAM of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GPAM (D-10) is available conjugated to agarose (sc-398135 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398135 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398135 PE), fluorescein (sc-398135 FITC), Alexa Fluor® 488 (sc-398135 AF488), Alexa Fluor® 546 (sc-398135 AF546), Alexa Fluor® 594 (sc-398135 AF594) or Alexa Fluor® 647 (sc-398135 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398135 AF680) or Alexa Fluor® 790 (sc-398135 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GPAM (D-10) is recommended for detection of GPAM 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GPAM siRNA (h): sc-90652, GPAM siRNA (m): sc-145677, GPAM shRNA Plasmid (h): sc-90652-SH, GPAM shRNA Plasmid (m): sc-145677-SH, GPAM shRNA (h) Lentiviral Particles: sc-90652-V and GPAM shRNA (m) Lentiviral Particles: sc-145677-V.

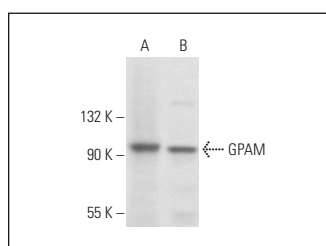
Molecular Weight of GPAM: 94 kDa.

Positive Controls: human liver extract: sc-363766 or Hep G2 cell lysate: sc-2227.

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-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



GPAM (D-10): sc-398135. Western blot analysis of GPAM expression in human liver tissue extract (A) and Hep G2 whole cell lysate (B).

SELECT PRODUCT CITATIONS

1. Hata, K., et al. 2020. Lipoprotein profile and lipid metabolism of PXB-cells®, human primary hepatocytes from liver-humanized mice: proposal of novel *in vitro* system for screening anti-lipidemic drugs. *Biomed. Res.* 41: 33-42.
2. Olichwier, A., et al. 2020. Interplay between thyroid hormones and stearyl-CoA desaturase 1 in the regulation of lipid metabolism in the heart. *Int. J. Mol. Sci.* 22: 109.
3. Tian, X., et al. 2022. Notoginsenoside R1 ameliorates cardiac lipotoxicity through AMPK signaling pathway. *Front. Pharmacol.* 13: 864326.

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.

PROTOCOLS

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

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