

GS2-like (G-1): sc-376365

BACKGROUND

The adiponutrin family consists of adiponutrin (ADPN), GS1, GS2, GS2-like, PNPLA1 and adipocyte triglyceride lipase (ATGL), also designated Desnutrin. ADPN, ATGL and GS2 display lipase activity, which is dependent upon the presence of an activated serine residue. GS2, also designated DXS1283E or patatin-like phospholipase domain containing 4 (PNPLA4), is expressed in all tissues that have been examined, including brain, heart, lung, muscle, liver, placenta, spleen, pancreas and kidney. It is also highly expressed in adipose tissue and may contribute to lipolysis in human adipose tissue. GS2-like, also designated patatin-like phospholipase domain containing 5 (PNPLA5), is expressed and regulated similarly to ADPN, although the levels of GS2-like mRNA are lower than ADPN. Overexpression of GS2, GS2-like, and ATGL lowers intracellular triglyceride levels. GS2-like and ADPN are strongly induced in the liver of ob/ob mice.

REFERENCES

- Lee, W.C., et al. 1994. Isolation of a new gene GS2 (DXS1283E) from a CpG island between STS a on Xp22.3. *Genomics* 22: 372-376.
- Baulande, S., et al. 2001. Adiponutrin, a transmembrane protein corresponding to a novel dietary- and obesity-linked mRNA specifically expressed in the adipose lineage. *J. Biol. Chem.* 276: 33336-33344.
- Jenkins, C.M., et al. 2004. Identification, cloning, expression, and purification of three novel human calcium-independent phospholipase A₂ family members possessing triacylglycerol lipase and acylglycerol transacylase activities. *J. Biol. Chem.* 279: 48968-48975.
- Liu, Y.M., et al. 2004. Adiponutrin: a new gene regulated by energy balance in human adipose tissue. *J. Clin. Endocrinol. Metab.* 89: 2684-2689.

CHROMOSOMAL LOCATION

Genetic locus: PNPLA5 (human) mapping to 22q13.31; Pnpla5 (mouse) mapping to 15 E2.

SOURCE

GS2-like (G-1) is a mouse monoclonal antibody raised against amino acids 28-103 mapping within an internal region of GS2-like 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.

GS2-like (G-1) is available conjugated to agarose (sc-376365 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376365 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376365 PE), fluorescein (sc-376365 FITC), Alexa Fluor[®] 488 (sc-376365 AF488), Alexa Fluor[®] 546 (sc-376365 AF546), Alexa Fluor[®] 594 (sc-376365 AF594) or Alexa Fluor[®] 647 (sc-376365 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376365 AF680) or Alexa Fluor[®] 790 (sc-376365 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

GS2-like (G-1) is recommended for detection of GS2-like 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).

Suitable for use as control antibody for GS2-like siRNA (h): sc-60771, GS2-like siRNA (m): sc-145791, GS2-like shRNA Plasmid (h): sc-60771-SH, GS2-like shRNA Plasmid (m): sc-145791-SH, GS2-like shRNA (h) Lentiviral Particles: sc-60771-V and GS2-like shRNA (m) Lentiviral Particles: sc-145791-V.

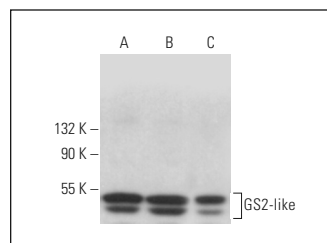
Molecular Weight of GS2-like: 48/35 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, K-562 whole cell lysate: sc-2203 or NIH/3T3 whole cell lysate: sc-2210.

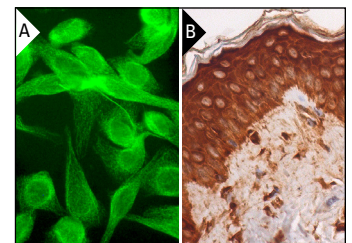
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



GS2-like (G-1): sc-376365. Western blot analysis of GS2-like expression in HeLa (A), K-562 (B) and NIH/3T3 (C) whole cell lysates.



GS2-like (G-1): sc-376365. Immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic and membrane localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of epidermal cells (B).

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.