

GS1 (B-4): sc-166043

BACKGROUND

The Adiponutrin family consists of adiponutrin (ADPN), adipocyte triglyceride lipase (ATGL, also designated desnutrin), GS1, GS2, GS2-like and PNPLA1. ADPN, ATGL and GS2 display lipase activity, which is dependent upon the presence of an activated serine residue. GS1, also designated DXF68S1E or haloacid dehalogenase-like hydrolase domain containing 1A (HDHD1A), is a 214 amino acid protein that is detected in human placenta and fibroblasts. The gene which encodes for GS1, HDHD1A, is of interest because it is an X-linked gene that escapes X-inactivation. This characteristic of the HDHD1A gene is particularly important in the understanding of human X chromosome structural organization as well as the mechanism of X-inactivation.

REFERENCES

- Salido, E.C., et al. 1992. The human enamel protein gene Amelogenin is expressed from both the X and the Y chromosomes. *Am. J. Hum. Genet.* 50: 303-316.
- Yen, P.H., et al. 1993. Isolation of a new gene from the distal short arm of the human X chromosome that escapes X-inactivation. *Hum. Mol. Genet.* 1: 47-52.
- Soehnge, H., et al. 1997. Cloning and sequencing of Ribosomal Protein L27a and a gene similar to human GS1 in *Drosophila*. *Gene* 185: 257-263.
- Online Mendelian Inheritance in Man, OMIM™. 1998. Johns Hopkins University, Baltimore, MD. MIM Number: 306480. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: PUDP (human) mapping to Xp22.31; Hdhd1a (mouse) mapping to 18 D1.

SOURCE

GS1 (B-4) is a mouse monoclonal antibody raised against amino acids 1-234 representing full length GS1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GS1 (B-4) is available conjugated to agarose (sc-166043 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166043 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166043 PE), fluorescein (sc-166043 FITC), Alexa Fluor® 488 (sc-166043 AF488), Alexa Fluor® 546 (sc-166043 AF546), Alexa Fluor® 594 (sc-166043 AF594) or Alexa Fluor® 647 (sc-166043 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166043 AF680) or Alexa Fluor® 790 (sc-166043 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

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

APPLICATIONS

GS1 (B-4) is recommended for detection of GS1 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 GS1 siRNA (h): sc-60768, GS1 siRNA (m): sc-60769, GS1 shRNA Plasmid (h): sc-60768-SH, GS1 shRNA Plasmid (m): sc-60769-SH, GS1 shRNA (h) Lentiviral Particles: sc-60768-V and GS1 shRNA (m) Lentiviral Particles: sc-60769-V.

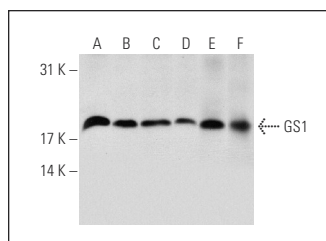
Molecular Weight of GS1: 24 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, MCF7 whole cell lysate: sc-2206 or rat testis extract: sc-2400.

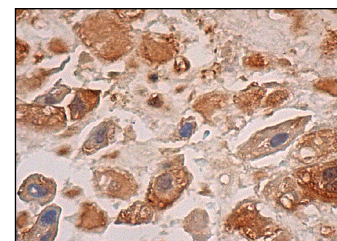
RECOMMENDED SUPPORT REAGENTS

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



GS1 (B-4): sc-166043. Western blot analysis of GS1 expression in HeLa (A), COLO 320DM (B), MCF7 (C) and JAR (D) whole cell lysates and rat placenta (E) and rat testis (F) tissue extracts.



GS1 (B-4): sc-166043. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of decidual cells.

SELECT PRODUCT CITATIONS

- Yang, Y., et al. 2014. The renoprotective effects of berberine via the EP4-G_{αs}-cAMP signaling pathway in different stages of diabetes in rats. *J. Recept. Signal Transduct. Res.* 34: 445-455.

RESEARCH USE

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