SANTA CRUZ BIOTECHNOLOGY, INC.

GS1 (B-4): sc-166043

The Power to Question

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.

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.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

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.

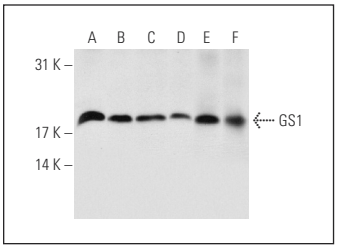
Molecular Weight of GS1: 24 kDa.

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

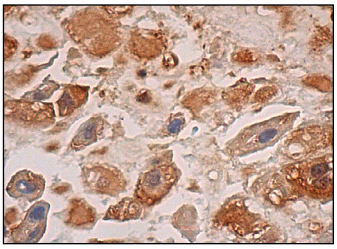
RECOMMENDED SUPPORT REAGENTS

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

1. Yang, Y., et al. 2014. The renoprotective effects of berberine via the EP4-$G_{\alpha s}$-cAMP signaling pathway in different stages of diabetes in rats. J. Recept. Signal Transduct. Res. 34: 445-455.
2. Cai, L.Y., et al. 2021. Targeting p300/CBP attenuates hepatocellular carcinoma progression through epigenetic regulation of metabolism. Cancer Res. 81: 860-872.

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.