SANTA CRUZ BIOTECHNOLOGY, INC.

GS1 (D-7): sc-365006

SANTA CRUZ BIOTECHNOLOGY

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.

REFERENCES

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2. Yen, P.H., et al. 1992. 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.
3. 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.
4. 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/
5. van Noort, V., et al. 2003. Predicting gene function by conserved co-expression. Trends Genet. 19: 238-242.
6. Wieland, I., et al. 2003. Further delineation of Wittwer syndrome and refinement of the mapping region. Am. J. Med. Genet. A 116A: 57-60.
7. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the mammalian gene collection (MGC). Genome Res. 14: 2121-2127.

CHROMOSOMAL LOCATION

Genetic locus: HDHD1 (human) mapping to Xp22.31; Hdhd1a (mouse) mapping to 18 D1.

SOURCE

GS1 (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 207-234 at the C-terminus of GS1 of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-365006 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

GS1 (D-7) 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.

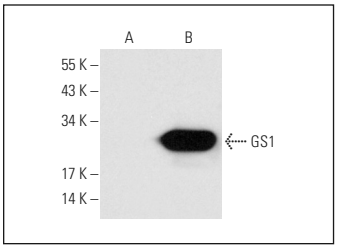
Molecular Weight of GS1: 24 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, GS1 (h): 293T Lysate: sc-113475 or rat testis extract: sc-2400.

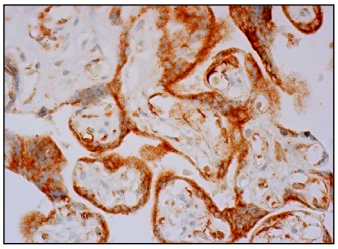
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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 (D-7): sc-365006. Western blot analysis of GS1 expression in non-transfected: sc-117752 (**A**) and human GS1 transfected: sc-113475 (**B**) 293T whole cell lysates.



GS1 (D-7): sc-365006. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

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.