

GS1 (D-6): sc-166497

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., Yen, P.H., Koprivnikar, K., Yu, L.C. and Shapiro, L.J. 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., Ellison, J., Salido, E.C., Mohandas, T. and Shapiro, L. 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., Huang, X., Becker, M., Conover, D. and Stern, M. 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/>
- van Noort, V., Snel, B. and Huynen, M.A. 2003. Predicting gene function by conserved co-expression. *Trends Genet.* 19: 238-242.
- Wieland, I., Muschke, P. and Wieacker, P. 2003. Further delineation of Wittwer syndrome and refinement of the mapping region. *Am. J. Med. Genet. A* 116A: 57-60.

CHROMOSOMAL LOCATION

Genetic locus: HDHD1A (human) mapping to Xp22.31; Hdh1a (mouse) mapping to 18 D1.

SOURCE

GS1 (D-6) is a mouse monoclonal antibody raised against amino acids 1-234 representing full length GS1 of mouse 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.

Blocking peptide available for competition studies, sc-166497 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

GS1 (D-6) 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) 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.

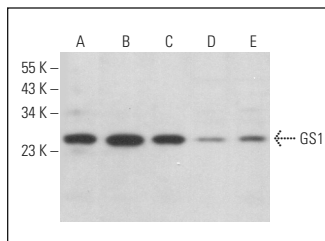
Molecular Weight of GS1: 24 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206, HeLa whole cell lysate: sc-2200 or COLO 320DM cell lysate: sc-2226.

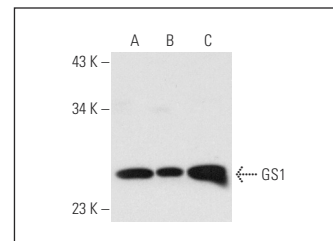
RECOMMENDED SUPPORT REAGENTS

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



GS1 (D-6): sc-166497. Western blot analysis of GS1 expression in HeLa (A), COLO 205 (B), SW480 (C), K-562 (D) and HEL 92.1.7 (E) whole cell lysates.



GS1 (D-6): sc-166497. Western blot analysis of GS1 expression in HeLa (A), COLO 320DM (B) and MCF7 (C) whole cell lysates.

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.