SANTA CRUZ BIOTECHNOLOGY, INC.

G0S2 (D-1): sc-518067

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

G0S2 (putative lymphocyte G_0/G_1 switch protein 2) is a 103 amino acid novel target of peroxisome proliferator-activated receptors (PPARs) and regulator of latent HIV. G0S2 may be involved in adipocyte differentiation and its expression is essential for committing cells to enter the G_1 phase of the cell cycle. G0S2 contains a CpG-rich island and multiple sites for potential phosphorylation by casein kinase II and protein kinase C. The gene encoding G0S2 maps to human chromosome 1, which is the largest human chromosome. Chromosome 1 spans about 260 million base pairs and makes up 8% of the human genome. There are about 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes Lamin A. Stickler syndrome, Parkinsons, Gaucher disease and Usher syndrome are also associated with chromosome 1. Aberrations in chromosome 1 are found in a variety of cancers including head and neck cancer, malignant melanoma and multiple myeloma.

REFERENCES

1. Russell, L. and Forsdyke, D.R. 1991. A human putative lymphocyte G_0/G_1 switch gene containing a CpG-rich island encodes a small basic protein with the potential to be phosphorylated. DNA Cell Biol. 10: 581-591.
2. Cristillo, A.D., et al. 1997. Cyclosporin A inhibits early mRNA expression of G_0/G_1 switch gene 2 (G0S2) in cultured human blood mononuclear cells. DNA Cell Biol. 16: 1449-1458.
3. Eudy, J.D., et al. 1998. Mutation of a gene encoding a protein with extracellular matrix motifs in Usher syndrome type IIa. Science 280: 1753-1757.

CHROMOSOMAL LOCATION

Genetic locus: G0S2 (human) mapping to 1q32.2.

SOURCE

G0S2 (D-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 2-19 at the N-terminus of G0S2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

G0S2 (D-1) is available conjugated to agarose (sc-518067 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-518067 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518067 PE), fluorescein (sc-518067 FITC), Alexa Fluor® 488 (sc-518067 AF488), Alexa Fluor® 546 (sc-518067 AF546), Alexa Fluor® 594 (sc-518067 AF594) or Alexa Fluor® 647 (sc-518067 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-518067 AF680) or Alexa Fluor® 790 (sc-518067 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

G0S2 (D-1) is recommended for detection of G0S2 of 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).

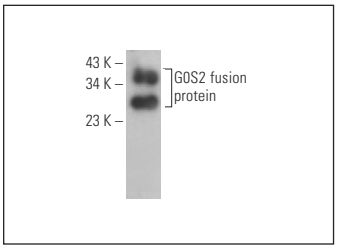
Suitable for use as control antibody for G0S2 siRNA (h): sc-78689, G0S2 shRNA Plasmid (h): sc-78689-SH and G0S2 shRNA (h) Lentiviral Particles: sc-78689-V.

Molecular Weight of G0S2: 11 kDa.

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



G0S2 (D-1): sc-518067. Western blot analysis of human recombinant G0S2 fusion protein.

SELECT PRODUCT CITATIONS

1. Ma, Y., et al. 2019. Activation of G_0/G_1 switch gene 2 by endoplasmic reticulum stress enhances hepatic steatosis. Metabolism 99: 32-44.
2. van Dierendonck, X.A.M.H., et al. 2020. HILPDA uncouples lipid droplet accumulation in adipose tissue macrophages from inflammation and metabolic dysregulation. Cell Rep. 30: 1811-1822.e6.
3. Hou, J., et al. 2022. Heterogeneity analysis of astrocytes following spinal cord injury at single-cell resolution. FASEB J. 36: e22442.

RESEARCH USE

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