

# GOS2 (G-12): sc-133423

## BACKGROUND

GOS2 (putative lymphocyte G<sub>0</sub>/G<sub>1</sub> switch protein 2) is a 103 amino acid novel target of peroxisome proliferator-activated receptors (PPARs) and regulator of latent HIV. GOS2 may be involved in adipocyte differentiation and its expression is essential for committing cells to enter the G<sub>1</sub> phase of the cell cycle. GOS2 contains a CpG-rich island and multiple sites for potential phosphorylation by casein kinase II and protein kinase C. The gene encoding GOS2 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, Parkinson's, 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

- Russell, L. and Forsdyke, D.R. 1991. A human putative lymphocyte G<sub>0</sub>/G<sub>1</sub> switch gene containing a CpG-rich island encodes a small basic protein with the potential to be phosphorylated. *DNA Cell Biol.* 10: 581-591.
- Cristillo, A.D., et al. 1997. Cyclosporin A inhibits early mRNA expression of G<sub>0</sub>/G<sub>1</sub> switch gene 2 (GOS2) in cultured human blood mononuclear cells. *DNA Cell Biol.* 16: 1449-1458.
- 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.
- Yayebi, N., et al. 2001. Gaucher disease and Parkinsonism: a phenotypic and genotypic characterization. *Mol. Genet. Metab.* 73: 313-321.
- Oliveira, S.A., et al. 2005. Identification of risk and age-at-onset genes on chromosome 1p in Parkinson disease. *Am. J. Hum. Genet.* 77: 252-264.
- Zandbergen, F., et al. 2005. The G<sub>0</sub>/G<sub>1</sub> switch gene 2 is a novel PPAR target gene. *Biochem. J.* 392 (Pt. 2): 313-324.
- Kitareewan, S., et al. 2008. GOS2 is an all-*trans*-retinoic acid target gene. *Int. J. Oncol.* 33: 397-404.

## CHROMOSOMAL LOCATION

Genetic locus: GOS2 (human) mapping to 1q32.2; G0s2 (mouse) mapping to 1 H6.

## SOURCE

GOS2 (G-12) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of GOS2 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-133423 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

GOS2 (G-12) is recommended for detection of GOS2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GOS2 (G-12) is also recommended for detection of GOS2 in additional species, including equine and porcine.

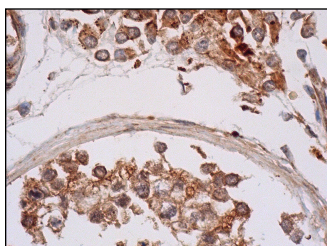
Suitable for use as control antibody for GOS2 siRNA (h): sc-78689, GOS2 siRNA (m): sc-145287, GOS2 shRNA Plasmid (h): sc-78689-SH, GOS2 shRNA Plasmid (m): sc-145287-SH, GOS2 shRNA (h) Lentiviral Particles: sc-78689-V and GOS2 shRNA (m) Lentiviral Particles: sc-145287-V.

Molecular Weight of GOS2: 11 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



GOS2 (G-12): sc-133423. Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing cytoplasmic staining of Leydig cells and cells in seminiferous ducts.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.