SANTA CRUZ BIOTECHNOLOGY, INC.

G0S2 siRNA (m): sc-145287

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, 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

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.
4. Tayebi, N., et al. 2001. Gaucher disease and Parkinsonism: a phenotypic and genotypic characterization. Mol. Genet. Metab. 73: 313-321.

CHROMOSOMAL LOCATION

Genetic locus: G0s2 (mouse) mapping to 1 H6.

PRODUCT

G0S2 siRNA (m) is a target-specific 19-25 nt siRNA designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see G0S2 shRNA Plasmid (m): sc-145287-SH and G0S2 shRNA (m) Lentiviral Particles: sc-145287-V as alternate gene silencing products.

STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

G0S2 siRNA (m) is recommended for the inhibition of G0S2 expression in mouse cells.

SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10 µM in 66 µl. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor G0S2 gene expression knockdown using RT-PCR Primer: G0S2 (m)-PR: sc-145287-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

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.