SANTA CRUZ BIOTECHNOLOGY, INC.

Adipogenin siRNA (h): sc-72451

BACKGROUND

Adipogenin, also known as SMAF1 (small adipocyte factor 1) or ADIG, is an 80 amino acid single-pass membrane protein that localizes to the nucleus and contains an N-terminal leucine-rich region and a possible nuclear localization signal. Expressed at high levels in white adipose tissue and at lower levels in muscle, heart and stomach, Adipogenin plays an important role in stimulating adipocyte development and differentiation. The gene encoding human Adipogenin maps to chromosome 20. Comprising approximately 2% of the human genome, chromosome 20 contains nearly 63 million bases that encode over 600 genes, some of which are associated with Creutzfeldt-Jakob disease, amyotrophic lateral sclerosis, spinal muscular atrophy, ring chromosome 20 epilepsy syndrome and Alagille syndrome.

REFERENCES

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2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611396. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Kim, J.Y., et al. 2005. Cloning, expression, and differentiation-dependent regulation of SMAF1 in adipogenesis. Biochem. Biophys. Res. Commun. 326: 36-44.
4. Hong, Y.H., et al. 2005. Upregulation of Adipogenin, an adipocyte plasma transmembrane protein, during adipogenesis. Mol. Cell. Biochem. 276: 133-141.
5. Ville, D., et al. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. Epilepsia 47: 543-549.
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CHROMOSOMAL LOCATION

Genetic locus: ADIG (human) mapping to 20q11.23.

PRODUCT

Adipogenin siRNA (h) is a pool of 3 target-specific 19-25 nt siRNAs 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 Adipogenin shRNA Plasmid (h): sc-72451-SH and Adipogenin shRNA (h) Lentiviral Particles: sc-72451-V as alternate gene silencing products.

For independent verification of Adipogenin (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-72451A, sc-72451B and sc-72451C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support 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

Adipogenin siRNA (h) is recommended for the inhibition of Adipogenin expression in human 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 Adipogenin gene expression knockdown using RT-PCR Primer: Adipogenin (h)-PR: sc-72451-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.