SANTA CRUZ BIOTECHNOLOGY, INC.

Vasculin siRNA (h): sc-61774

BACKGROUND

Vascular wall-linked protein, or Vasculin, is primarily expressed in the arterial wall and in plasma. It is also differentially expressed in human atherogenesis. Alternative splicing of exon 3 of the Vasculin gene produces three variants. Vasculin binds to and activates the minimal self-sufficient promoter element (MSPE) of the mouse Ada gene promoter and binds to and partially suppresses the GC-rich promoter of the nonhomologous human TOP2A gene promoter. It acts as a nuclear factor that can form complexes with TATA-binding proteins, transcription factors TFIIB and TFIIF, RNA polymerase II and p300. The regulated expression of Vasculin in plaques suggests that it may be involved in atherogenesis, and its presence in plasma may implicate Vasculin as a marker for atherosclerosis.

REFERENCES

1. Boisseau, M.R. 1998. Venous valves in the legs: hemodynamic and biological problems and relationship to physiopathology. J. Mal. Vasc. 22: 122-127.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608412. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Bijnens, A.P., et al. 2003. Vasculin, a novel vascular protein differentially expressed in human atherogenesis. Blood 102: 2803-2810.
4. Hsu, L.C., et al. 2003. The murine G+C-rich promoter binding protein mGPBP is required for promoter-specific transcription. Mol. Cell. Biol. 23: 8773-8785.

CHROMOSOMAL LOCATION

Genetic locus: GPBP1 (human) mapping to 5q11.2.

PRODUCT

Vasculin 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 Vasculin shRNA Plasmid (h): sc-61774-SH and Vasculin shRNA (h) Lentiviral Particles: sc-61774-V as alternate gene silencing products.

For independent verification of Vasculin (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-61774A, sc-61774B and sc-61774C.

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

Vasculin siRNA (h) is recommended for the inhibition of Vasculin 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 Vasculin gene expression knockdown using RT-PCR Primer: Vasculin (h)-PR: sc-61774-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.