SANTA CRUZ BIOTECHNOLOGY, INC.

PCPE-2 siRNA (h): sc-78055

BACKGROUND

PCPE-2 (procollagen C-endopeptidase enhancer 2), also known as Procollagen COOH-terminal proteinase enhancer 2, is a 415 amino acid secreted protein that binds to the C-terminal propeptides of type I and II procollagens. PCPE-2 contains two CUB domains, which are involved in protein-protein interactions and an NTR domain, which potentially is involved in the regulation of metalloproteases such as BMP-1. Due to its strong affinity to heparin, PCPE-2 may play a role in the blood coagulation system. PCPE-2 is expressed in heart, lungs, brain, kidney, skeletal muscle, placenta, pancreas and trabecular meshwork. Interestingly, PCPE-2 enhances cleavage of the hexapeptide extension of pro-apolipoprotein (apo)-AI, thereby accelerating the proteolytic processing of apoAI. This evidence suggests that PCPE-2 may be involved in the regulation of apoAI synthesis and HDL levels, potentially playing a role in cardiovascular disease.

REFERENCES

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3. Scott, I.C., et al. 1999. Structural organization and expression patterns of the human and mouse genes for the type I procollagen COOH-terminal proteinase enhancer protein. Genomics 55: 229-234.
4. Xu, H., et al. 2000. Identification and expression of a novel type I procollagen C-proteinase enhancer protein gene from the glaucoma candidate region on 3q21-q24. Genomics 66: 264-273.
5. Steiglitz, B.M., et al. 2002. PCOLCE2 encodes a functional procollagen C-proteinase enhancer (PCPE2) that is a collagen-binding protein differing in distribution of expression and post-translational modification from the previously described PCPE1. J. Biol. Chem. 277: 49820-49830.
6. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 607064. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/

CHROMOSOMAL LOCATION

Genetic locus: PCOLCE2 (human) mapping to 3q23.

PRODUCT

PCPE-2 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 PCPE-2 shRNA Plasmid (h): sc-78055-SH and PCPE-2 shRNA (h) Lentiviral Particles: sc-78055-V as alternate gene silencing products.

For independent verification of PCPE-2 (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-78055A, sc-78055B and sc-78055C.

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

PCPE-2 siRNA (h) is recommended for the inhibition of PCPE-2 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 PCPE-2 gene expression knockdown using RT-PCR Primer: PCPE-2 (h)-PR: sc-78055-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.