

Angiotensinase C siRNA (h): sc-60170

BACKGROUND

Angiotensinase C, also designated lysosomal Pro-X carboxypeptidase or prolylcarboxypeptidase, belongs to the peptidase S28 family. Angiotensinase C which is highly expressed in placenta, lung and liver and is also expressed in heart, pancreas, kidney and brain, is a cell matrix-associated prekallikrein (PK) activator. Angiotensin II, a substrate of Angiotensinase C, is involved in regulating blood pressure and electrolyte balance, suggesting that the gene encoding for Angiotensinase C may be related to essential hypertension, a condition involving high blood pressure with no known cause. Angiotensinase C cleaves off the C-terminal amino acids linked to proline in peptides such as Angiotensin II, III and des-Arg9-bradykinin. The cleavage occurs at an acidic pH, but with some substrates enzymatic activity is retained at a neutral pH.

REFERENCES

1. Suga, K., et al. 1995. Prolylcarboxypeptidase (Angiotensinase C): purification and characterization of the enzyme from *Xanthomanas maltophilia*. Biosci. Biotechnol. Biochem. 59: 298-301.
2. Watson, B., et al. 1997. The hum a candidate gene for essential hypertension. Genomics 44: 365-367.
3. Shariat-Madar, Z., et al. 2002. Identification and charact cell prekallikrein activator. J. Biol. Chem. 277: 17962-17969.
5. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 176785. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
4. Shariat-Madar, Z., et al. 2004. Recombinant prolylcarboxypeptidase activates plasma prekallikrein. Blood 103: 4554-4561.
6. Shariat-Madar, Z., et al. 2005. Overexpression on Chinese hamster ovary cells. Am. J. Physiol. Heart Circ. Physiol. 289: H2697-H2703.

CHROMOSOMAL LOCATION

Genetic locus: PRCP (human) mapping to 11q14.1.

PRODUCT

Angiotensinase C 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Angiotensinase C shRNA Plasmid (h): sc-60170-SH and Angiotensinase C shRNA (h) Lentiviral Particles: sc-60170-V as alternate gene silencing products.

For independent verification of Angiotensinase C (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-60170A, sc-60170B and sc-60170C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

Angiotensinase C siRNA (h) is recommended for the inhibition of Angiotensinase C 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 μ M in 66 μ l. 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 Angiotensinase C gene expression knockdown using RT-PCR Primer: Angiotensinase C (h)-PR: sc-60170-PR (20 μ l, 499 bp). 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.