SANTA CRUZ BIOTECHNOLOGY, INC.

Angiotensinase C siRNA (m): sc-60171

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 prekalli-krein (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.
4. 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/
5. 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 (mouse) mapping to 7 E1.

PRODUCT

Angiotensinase C siRNA (m) 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 Angiotensinase C shRNA Plasmid (m): sc-60171-SH and Angiotensinase C shRNA (m) Lentiviral Particles: sc-60171-V as alternate gene silencing products.

For independent verification of Angiotensinase C (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-60171A, sc-60171B and sc-60171C.

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

Angiotensinase C siRNA (m) is recommended for the inhibition of Angiotensinase C 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 Angiotensinase C gene expression knockdown using RT-PCR Primer: Angiotensinase C (m)-PR: sc-60171-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Zhu, L., et al. 2012. Angiotensin II type 2 receptor-stimulated activation of plasma prekallikrein and bradykinin release: role of SHP-1. Am. J. Physiol. Heart Circ. Physiol. 302: H2553-H2559.

RESEARCH USE

For research use only, not for use in diagnostic procedures.