

SerpinA3c siRNA (m): sc-153358

BACKGROUND

The serine proteinase inhibitors (serpins) compose a superfamily of proteins with a diverse set of functions, including the control of blood coagulation, complement activation, programmed cell death and development. Serpins are secreted glycoproteins that contain a stretch of peptide that mimics a true substrate for a corresponding serine protease. SerpinA3c, or Kallikrein-binding protein (KBP), is a 417 amino acid mouse protein that belongs to the Serpin family. SerpinA3c binds and regulates the activity of tissue kallikrein and is thought to play a role in the reduction of blood pressure independent of regulating the activity of tissue kallikrein. SerpinA3c is the homolog of the rat protein SerpinA3k, which also binds and inhibits kallikreins and inhibits trypsin but not chymotrypsin or elastase. The SerpinA3c gene is also conserved in human, chimpanzee, Rhesus monkey, canine and bovine.

REFERENCES

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3. Inglis, J.D. and Hill, R.E. 1991. The murine Spi-2 proteinase inhibitor locus: a multigene family with a hypervariable reactive site domain. *EMBO J.* 10: 255-261.
4. Ohkubo, K., et al. 1991. Molecular cloning and characterization of rat contrapsin-like protease inhibitor and related proteins. *J. Biochem.* 109: 243-250.
5. Chen, L.M., et al. 1996. Tissue kallikrein-binding protein reduces blood pressure in transgenic mice. *J. Biol. Chem.* 271: 27590-27594.
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CHROMOSOMAL LOCATION

Genetic locus: SerpinA3c (mouse) mapping to 12 E.

PRODUCT

SerpinA3c siRNA (m) is a pool of 2 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 SerpinA3c shRNA Plasmid (m): sc-153358-SH and SerpinA3c shRNA (m) Lentiviral Particles: sc-153358-V as alternate gene silencing products.

For independent verification of SerpinA3c (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-153358A and sc-153358B.

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

SerpinA3c siRNA (m) is recommended for the inhibition of SerpinA3c 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 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 SerpinA3c gene expression knockdown using RT-PCR Primer: SerpinA3c (m)-PR: sc-153358-PR (20 μ l). 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.