



SerpinA3n siRNA (m): sc-153364

BACKGROUND

The serine proteinase inhibitors (serpins) are 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. SerpinA3n (serine (or cysteine) peptidase inhibitor, clade A, member 3N), also known as Spi2-2, is a 418 amino acid mouse protein that belongs to the Serpin family. SerpinA3n is a homolog of human AACT, which is a plasma protease inhibitor synthesized in the liver as a single glycopeptide chain. Elevated levels of AACT are widely, but not universally, reported in the cerebrospinal fluid and plasma of AD patients. Prostate-specific antigen (PSA) and its SDS-stable complex with AACT are in widespread use as markers for the diagnosis of prostate cancer. AACT deficiency may also be a possible cause of chronic liver disease.

REFERENCES

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2. Kalsheker, N., et al. 2002. Gene regulation of the serine proteinase inhibitors α -1-antitrypsin and α -1-antichymotrypsin. *Biochem Soc. Trans.* 30: 93-98.
3. Hsieh, M.C. and Cooperman, B.S. 2002. Inhibition of prostate-specific antigen (PSA) by α -1-antichymotrypsin: salt-dependent activation mediated by a conformational change. *Biochemistry* 41: 2990-2997.
4. Yoon, D., et al. 2002. Role of α -1-antichymotrypsin deficiency in promoting cirrhosis in two siblings with heterozygous α -1-antitrypsin deficiency phenotype SZ. *Gut* 50: 730-732.
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CHROMOSOMAL LOCATION

Genetic locus: Serpina3n (mouse) mapping to 12 E.

PRODUCT

SerpinA3n 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SerpinA3n shRNA Plasmid (m): sc-153364-SH and SerpinA3n shRNA (m) Lentiviral Particles: sc-153364-V as alternate gene silencing products.

For independent verification of SerpinA3n (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-153364A, sc-153364B and sc-153364C.

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

SerpinA3n siRNA (m) is recommended for the inhibition of SerpinA3n 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 SerpinA3n gene expression knockdown using RT-PCR Primer: SerpinA3n (m)-PR: sc-153364-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.