SANTA CRUZ BIOTECHNOLOGY, INC.

ADAMTS-20 siRNA (h): sc-95991

BACKGROUND

ADAMTS (a disintegrin and metalloproteinase domain with thrombospondin type-1 modules) is a family of zinc-dependent proteases that are implicated in a variety of normal and pathological conditions, including arthritis and cancer. ADAMTS protein family members contain an N-terminal propeptide domain, a metalloproteinase domain, a disintegrin-like domain and a C-terminus that contains a varying number of thrombospondin type-1 (TSP-1) motifs. ADAMTS genes are primarily expressed in fetal tissues, including lung, kidney and liver. ADAMTS-20 (ADAM metallopeptidase with thrombospondin type 1 motif, 20), also known as GON-1, is a 1,910 amino acid protein that exists as two alternatively spliced isoforms. Encoded by a gene that maps to human chromosome 12q12, ADAMTS-20 contains fifteen TSP-1 motifs and binds one zinc ion per subunit. Very sparingly expressed, ADAMTS-20 is detected at low levels in testis, prostate, ovary, heart, placenta, lung and pancreas. Conversely, ADAMTS-20 is overexpressed in several brain, colon and breast carcinomas. ADAMTS-20 may play a role in tissue-remodeling processes.

REFERENCES

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7. Mittaz, L., et al. 2005. Neonatal calyceal dilation and renal fibrosis resulting from loss of Adamts-1 in mouse kidney is due to a developmental dysgenesis. Nephrol. Dial. Transplant. 20: 419-423.
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CHROMOSOMAL LOCATION

Genetic locus: ADAMTS20 (human) mapping to 12q12.

RESEARCH USE

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

PRODUCT

ADAMTS-20 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 ADAMTS-20 shRNA Plasmid (h): sc-95991-SH and ADAMTS-20 shRNA (h) Lentiviral Particles: sc-95991-V as alternate gene silencing products.

For independent verification of ADAMTS-20 (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-95991A, sc-95991B and sc-95991C.

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

ADAMTS-20 siRNA (h) is recommended for the inhibition of ADAMTS-20 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 ADAMTS-20 gene expression knockdown using RT-PCR Primer: ADAMTS-20 (h)-PR: sc-95991-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.