SANTA CRUZ BIOTECHNOLOGY, INC.

Arylsulfatase G siRNA (h): sc-93683

BACKGROUND

Sulfatases hydrolyze sulfate esters from sulfated steroids, carbohydrates, proteoglycans and glycolipids. They are involved in hormone biosynthesis, modulation of cell signaling and degradation of macromolecules. Arylsulfatase G, also known as ARSG, is a 525 amino acid widely expressed Endoplasmic reticulum protein belonging to the sulfatase family. Considered a novel arylsulfatase, Arylsulfatase G has activity toward pseudosubstrates including p-nitrocatechol sulfate and 4-methylumbelliferyl sulfate. Arylsulfatase G accumulates within lysosomes and as a glycoprotein it binds specifically to mannose 6-phosphate receptors. The murine homolog of Arylsulfatase G gene product shows 87% identity with human Arylsulfatase G. The gene encoding Arylsulfatase G is located on human chromsome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: ARSG (human) mapping to 17q24.2.

PRODUCT

Arylsulfatase G 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 Arylsulfatase G shRNA Plasmid (h): sc-93683-SH and Arylsulfatase G shRNA (h) Lentiviral Particles: sc-93683-V as alternate gene silencing products.

For independent verification of Arylsulfatase G (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-93683A, sc-93683B and sc-93683C.

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

Arylsulfatase G siRNA (h) is recommended for the inhibition of Arylsulfatase G 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 Arylsulfatase G gene expression knockdown using RT-PCR Primer: Arylsulfatase G (h)-PR: sc-93683-PR (20 µl). 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.