SANTA CRUZ BIOTECHNOLOGY, INC.

Arylsulfatase K siRNA (h): sc-91809

BACKGROUND

Sulfatases hydrolyze sulfate esters from sulfated steroids, carbohydrates, proteoglycans and glycolipids, and are involved in hormone biosynthesis, cell signal modulation and macromolecule degradation. Arylsulfatase K, also known as ARSK (arylsulfatase family, member K), ASK or TSULF (telethon sulfatase), is a 536 amino acid protein belonging to the sulfatase family. Encoded by a gene that maps to human chromosome 5q15, Arylsulfatase K is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, *Kluyveromyces lactis*, *Magnaporthe grisea* and *Neurospora crassa*. Arylsulfatase K, like all human sulfatases, contains nine regions of strong evolutionary conservation, most of which encompass residues involved in sulfatase hydrolysis reactions. Arylsulfatase K participates in arylsulfatase activity, hydrolase activity and metal ion binding, and likely associates with cellular organelles or membrane structures.

REFERENCES

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6. Burridge, K.A., et al. 2010. Environment and vascular bed origin influence differences in endothelial transcriptional profiles of coronary and iliac arteries. Am. J. Physiol. Heart Circ. Physiol. 299: H837-H846.
7. Buono, M., et al. 2010. Sulfatase activities towards the regulation of cell metabolism and signaling in mammals. Cell. Mol. Life Sci. 67: 769-780.
8. Ratzka, A., et al. 2010. Expression patterns of sulfatase genes in the developing mouse embryo. Dev. Dyn. 239: 1779-1788.
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CHROMOSOMAL LOCATION

Genetic locus: ARSK (human) mapping to 5q15.

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.

PRODUCT

Arylsulfatase K 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 K shRNA Plasmid (h): sc-91809-SH and Arylsulfatase K shRNA (h) Lentiviral Particles: sc-91809-V as alternate gene silencing products.

For independent verification of Arylsulfatase K (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-91809A, sc-91809B and sc-91809C.

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 K siRNA (h) is recommended for the inhibition of Arylsulfatase K 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 K gene expression knockdown using RT-PCR Primer: Arylsulfatase K (h)-PR: sc-91809-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.