SANTA CRUZ BIOTECHNOLOGY, INC.

SLC43A1 siRNA (m): sc-153562

BACKGROUND

SLC43A1 (solute carrier family 43, member 1) is a 559 amino acid multi-pass membrane protein that belongs to the SLC43A transporter family. In adult tissues, SLC43A1 is found ubiquitously with highest expression in pancreas. In fetal tissues, highest expression of SLC43A1 is found in liver, lower levels in kidney and lung. High levels of SLC43A1 are found in prostate cancer cells. SLC43A1 is up-regulated in early prostate cancer development with highest expression level in seminomas of testicular germ cell tumors. SLC43A1 functions as a sodium-independent, high affinity transport of large neutral amino acids. SLC43A1 has narrower substrate selectivity compared to SLC7A5 and SLC7A8 and mainly transports branched-chain amino acids and phenylalanine. SLC43A1 plays a role in the development of human prostate cancer, from prostatic intraepithelial neoplasia to invasive prostate cancer. Existing as two alternatively spliced isoforms, the SLC43A1 gene is conserved in canine, mouse, rat and zebrafish, and maps to human chromosome 11q12.1.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Slc43a1 (mouse) mapping to 2 D.

PROTOCOLS

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

PRODUCT

SLC43A1 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see SLC43A1 shRNA Plasmid (m): sc-153562-SH and SLC43A1 shRNA (m) Lentiviral Particles: sc-153562-V as alternate gene silencing products.

For independent verification of SLC43A1 (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-153562A, sc-153562B and sc-153562C.

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

SLC43A1 siRNA (m) is recommended for the inhibition of SLC43A1 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 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 SLC43A1 gene expression knockdown using RT-PCR Primer: SLC43A1 (m)-PR: sc-153562-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.