SANTA CRUZ BIOTECHNOLOGY, INC.

SLC6A14 siRNA (h): sc-91007

BACKGROUND

SLC6A14 (solute carrier family 6 (amino acid transporter), member 14) is a 642 amino acid multi-pass membrane protein that belongs to the sodium:neurotransmitter symporter (SNF) family and the SLC6A14 subfamily. SLC6A14 mediates the uptake of a broad range of neutral and cationic amino acids (with the exception of proline) in a Na^+/Cl^-—dependent manner. Levels of SLC6A14 are highest in adult and fetal lung, trachea and salivary gland. Lower levels detected in mammary gland, stomach and pituitary gland, and very low levels in colon, uterus, prostate and testis. Significant associations between susceptibility to obesity and SNPs in exon 14 and in intron 12 of the SLC6A14 gene have been found ($p = 0.0002$ and 0.07, respectively). Containing 14 exons and spanning about 29 kb, the SLC6A14 gene is conserved in canine, bovine, mouse, rat, zebrafish and *C. elegans,* and maps to human chromosome Xq23.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: SLC6A14 (human) mapping to Xq23.

PRODUCT

SLC6A14 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 SLC6A14 shRNA Plasmid (h): sc-91007-SH and SLC6A14 shRNA (h) Lentiviral Particles: sc-91007-V as alternate gene silencing products.

For independent verification of SLC6A14 (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-91007A, sc-91007B and sc-91007C.

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

SLC6A14 siRNA (h) is recommended for the inhibition of SLC6A14 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 SLC6A14 gene expression knockdown using RT-PCR Primer: SLC6A14 (h)-PR: sc-91007-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.