SANTA CRUZ BIOTECHNOLOGY, INC.

ATRNL1 siRNA (h): sc-90786

BACKGROUND

ATRNL1 (attractin-like protein 1) is a 1,379 amino acid single-pass type I membrane protein that may play a role in melanocortin signaling pathways that regulate energy homeostasis. The ATRNL1 protein contains a C-type lectin domain, a CUB domain, two EGF-like domains, six Kelch repeats, two Laminin EGF-like domains and five PSI domains. ATRNL1 interacts with MC4-R in several regions known to be important in the regulation of energy homeostasis by melanocortins, such as the paraventricular nucleus of hypothalamus and the dorsal motor nucleus of the vagus. The ATRNL1 gene is conserved in canine, bovine, mouse, rat, chicken, zebrafish and *C.elegans,* exists as two alternatively spliced isoforms and maps to human chromosome 10q25.3. Strong evidence of linkage to late-onset Alzheimer disease (LOAD) is linked to chromosome 10, which implicates a wide region and at least one disease-susceptibility locus.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: ATRNL1 (human) mapping to 10q25.3.

PRODUCT

ATRNL1 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 ATRNL1 shRNA Plasmid (h): sc-90786-SH and ATRNL1 shRNA (h) Lentiviral Particles: sc-90786-V as alternate gene silencing products.

For independent verification of ATRNL1 (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-90786A, sc-90786B and sc-90786C.

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

ATRNL1 siRNA (h) is recommended for the inhibition of ATRNL1 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 ATRNL1 gene expression knockdown using RT-PCR Primer: ATRNL1 (h)-PR: sc-90786-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.