SANTA CRUZ BIOTECHNOLOGY, INC.

RUFY2 siRNA (h): sc-90742

BACKGROUND

RUFY2 (RUN and FYVE domain-containing protein 2) is a 655 amino acid protein that contains a RUN domain and a C-terminal FYVE-type zinc finger with two coiled-coil domains in-between. Localizing to nucleus, RUFY2 demonstrates highest expression in amygdala, but also is expressed in the rest of the brain, lung and testis. Believed to be involved with zinc ion binding, RUFY2 interacts with Bmx. Existing as four alternatively spliced isoforms, the RUFY2 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish and fruit fly, and maps to human chromosome 10q21.3. The RUFY2 gene maps to a region of chromosome 10q that has been linked to both late-onset Alzheimer disease and elevated plasma levels of pathogenic β-Amyloid. Spanning nearly 135 million base pairs, chromosome 10 makes up approximately 4.5% of total DNA in cells and encodes nearly 1,200 genes. Defects in some of the genes that map to chromosome 10 are associated with Charcot-Marie-Tooth disease, Jackson-Weiss syndrome, Usher syndrome, nonsyndromatic deafness, Wolman's syndrome, Cowden syndrome, multiple endocrine neoplasia type 2 and porphyria.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: RUFY2 (human) mapping to 10q21.3.

PRODUCT

RUFY2 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 RUFY2 shRNA Plasmid (h): sc-90742-SH and RUFY2 shRNA (h) Lentiviral Particles: sc-90742-V as alternate gene silencing products.

For independent verification of RUFY2 (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-90742A, sc-90742B and sc-90742C.

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

RUFY2 siRNA (h) is recommended for the inhibition of RUFY2 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 RUFY2 gene expression knockdown using RT-PCR Primer: RUFY2 (h)-PR: sc-90742-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.