SANTA CRUZ BIOTECHNOLOGY, INC.

RUSC1 siRNA (h): sc-88320

BACKGROUND

RUSC1 (RUN and SH3 domain containing 1) is a 902 amino acid protein that contains a RUN domain and a SH3 domain. RUSC1's RUN domain is necessary for NGF induced nuclear redistribution. RUSC1 is a putative signaling adapter which may play a role in neuronal differentiation. RUSC1 seems to be involved in signaling pathways that are regulated by the prolonged activation of MAPK. The RUSC1 protein may also be involved in regulation of NGF-dependent neurite outgrowth. Predominantly expressed in brain, RUSC1 localizes to cytoplasm and nucleus. RUSC1 is translocated to the nuclear envelope upon stimulation with NGF. RUSC1 is phosphorylated on serine residues following nuclear translocation. Existing as 2 alternatively spliced isoforms, the RUSC1 gene consists of 11 exons and maps to human chromosome 1q22, a region that has been linked to type 2 diabetes in humans. RUSC1 isoform 1 and RUSC2 show 30.5% total amino-acid identity.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: RUSC1 (human) mapping to 1q22.

PROTOCOLS

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

PRODUCT

RUSC1 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 RUSC1 shRNA Plasmid (h): sc-88320-SH and RUSC1 shRNA (h) Lentiviral Particles: sc-88320-V as alternate gene silencing products.

For independent verification of RUSC1 (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-88320A, sc-88320B and sc-88320C.

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

RUSC1 siRNA (h) is recommended for the inhibition of RUSC1 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 RUSC1 gene expression knockdown using RT-PCR Primer: RUSC1 (h)-PR: sc-88320-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.