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RUSC2 siRNA (m): sc-153179

BACKGROUND

RUSC2 (RUN and SH3 domain containing 2), also known as Iporin, is a 1,516 amino acid cytoplasmic protein that is widely expressed, with highest levels in brain and testis. The RUN domain of RUSC2 is required for interaction with Rab 1A, Rab 1B and GM130. It is thought that RUSC2 may possibly function as a connector between endoplasmic reticulum (ER) derived vesicle targets triggered by the Rab 1 GTPases and a signaling pathway regulated by molecules containing SH3 and/or poly-proline regions. RUSC2 also consists of a SH3 domain, suggesting a role in protein-protein interactions. RUSC2 is encoded by a gene located human chromosome 9p13.3, which houses over 900 genes and comprises nearly 4% of the human genome. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, and familial dysautonomia, are both associated with chromosome 9. Notably, chromosome 9 encompasses the largest interferon family gene cluster.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: *Rusc2* (mouse) mapping to 4 A5.

PROTOCOLS

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

PRODUCT

RUSC2 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see RUSC2 shRNA Plasmid (m): sc-153179-SH and RUSC2 shRNA (m) Lentiviral Particles: sc-153179-V as alternate gene silencing products.

For independent verification of RUSC2 (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-153179A, sc-153179B and sc-153179C.

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 μ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330 μ l of RNase-free water makes a 10 μ M solution in a 10 μ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

RUSC2 siRNA (m) is recommended for the inhibition of RUSC2 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 μ M in 66 μ l. 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 RUSC2 gene expression knockdown using RT-PCR Primer: RUSC2 (m)-PR: sc-153179-PR (20 μ l). 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.