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reticulocalbin-1 siRNA (m): sc-152814

BACKGROUND

RCN proteins are highly conserved and, depending on their phosphorylation status, either stimulate or inhibit calcineurin, a Ca^{2+} -dependent protein phosphatase that couples Ca^{2+} signals to cellular responses. Reticulocalbin-1, also known as RCN1 or proliferation-inducing gene 20, is a 331 amino acid ubiquitously expressed protein that belongs to the CREC family. RCN1 contains a leader peptide, six EF-hand calcium-binding motifs, and a C-terminal HDEL sequence, which serves as an endoplasmic reticulum retention signal. RCN1 may regulate calcium-dependent activities in the endoplasmic reticulum lumen or post-ER compartment. The human RCN1 protein is 95% identical to the mouse Rcn protein. The RCN1 gene is conserved in chimpanzee, mouse, rat, chicken and zebrafish, and maps to human chromosome 11p13.

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CHROMOSOMAL LOCATION

Genetic locus: Rcn1 (mouse) mapping to 2 E3.

PRODUCT

reticulocalbin-1 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 reticulocalbin-1 shRNA Plasmid (m): sc-152814-SH and reticulocalbin-1 shRNA (m) Lentiviral Particles: sc-152814-V as alternate gene silencing products.

For independent verification of reticulocalbin-1 (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-152814A, sc-152814B and sc-152814C.

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

reticulocalbin-1 siRNA (m) is recommended for the inhibition of reticulocalbin-1 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 reticulocalbin-1 gene expression knockdown using RT-PCR Primer: reticulocalbin-1 (m)-PR: sc-152814-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.