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PRKRIP1 siRNA (m): sc-152469

BACKGROUND

PRKRIP1 (PKR interacting protein 1, IL-11 inducible), also known as C114, is a 184 amino acid IL-11 induced protein that is expressed in brain, liver, testis and kidney. Localizing to the nucleus with highest expression in the nucleolus, PRKRIP1 contains an arginine-rich region and displays double-stranded RNA (dsRNA)-binding activity. Via its N-terminus, PRKRIP1 interacts with PKR (protein kinase RNA-activated) and functions to inhibit or negatively regulate PKR activity. The inhibition of PKR leads to the inhibition of eIF2 α phosphorylation. eIF2 α , a component of the eukaryotic initiation complex, functions to bind tRNA to the 40S ribosomal subunit (in a GTP-dependent manner), thereby initiating translation. The phosphorylation state of eIF2 α controls the rate of tRNA translation and, when phosphorylated, translation/protein synthesis is inhibited. This suggests that PRKRIP1, through its ability to inhibit eIF2 α phosphorylation and promote protein synthesis, may play a role in adipogenesis.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Prkrip1 (mouse) mapping to 5 G2.

PRODUCT

PRKRIP1 siRNA (m) is a pool of 2 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 PRKRIP1 shRNA Plasmid (m): sc-152469-SH and PRKRIP1 shRNA (m) Lentiviral Particles: sc-152469-V as alternate gene silencing products.

For independent verification of PRKRIP1 (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-152469A and sc-152469B.

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

PRKRIP1 siRNA (m) is recommended for the inhibition of PRKRIP1 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 PRKRIP1 gene expression knockdown using RT-PCR Primer: PRKRIP1 (m)-PR: sc-152469-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.

PROTOCOLS

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