SANTA CRUZ BIOTECHNOLOGY, INC.

p52 S6 kinase siRNA (m): sc-106342

BACKGROUND

The phosphorylation and dephosphorylation of proteins on serine and threonine residues is an essential means of regulating a broad range of cellular functions in eukaryotes, including cell division, homeostasis and apoptosis. A group of proteins that are intimately involved in this process are the serine/threonine (Ser/Thr) protein kinases. p52 S6 kinase, also known as RPS6KC1 (ribosomal protein S6 kinase, 52kDa, polypeptide 1) or RPK118, is a 1,066 amino acid member of the Ser/Thr kinase family that localizes to both the cytoplasm and the nucleus and contains one MIT domain, one PX domain and two protein kinase domains. Expressed at high levels in brain, placenta, heart, testis, kidney, liver and skeletal muscle, p52 S6 kinase catalyzes the ATP-dependent phosphorylation of target proteins and is thought to be involved in transmitting sphingosine-1 phosphate (SPP)-mediated signaling into the cell.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Rps6kc1 (mouse) mapping to 1 H6.

PROTOCOLS

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

PRODUCT

p52 S6 kinase 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see p52 S6 kinase shRNA Plasmid (m): sc-106342-SH and p52 S6 kinase shRNA (m) Lentiviral Particles: sc-106342-V as alternate gene silencing products.

For independent verification of p52 S6 kinase (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-106342A, sc-106342B and sc-106342C.

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

p52 S6 kinase siRNA (m) is recommended for the inhibition of p52 S6 kinase 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 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 p52 S6 kinase gene expression knockdown using RT-PCR Primer: p52 S6 kinase (m)-PR: sc-106342-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.