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SIK2 siRNA (m): sc-44365

BACKGROUND

QIK (Qin-induced kinase) is a serine/threonine-protein kinase that belongs to the AMPK/SNF1 kinase family. Also designated SIK2 (SNF1-like kinase 2), QIK is one of twelve human kinases (NUAK1, NUAK2, BRSK1, BRSK2, QIK, QSK, SIK, MARK1, MARK2, MARK3, MARK4 and MELK) related to AMPK. QIK is an ubiquitously expressed protein and is rapidly upregulated after a hormone-regulated form of Qin is activated. *In vitro* kinase tests demonstrate that QIK is capable of autophosphorylation. Elevated levels of QIK transcripts are also observed in Src-transformed cells, suggesting that Src and Qin share some targets.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: *Sik2* (mouse) mapping to 9 A5.3.

PRODUCT

SIK2 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 SIK2 shRNA Plasmid (m): sc-44365-SH and SIK2 shRNA (m) Lentiviral Particles: sc-44365-V as alternate gene silencing products.

For independent verification of SIK2 (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-44365A, sc-44365B and sc-44365C.

PROTOCOLS

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

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

SIK2 siRNA (m) is recommended for the inhibition of SIK2 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 SIK2 gene expression knockdown using RT-PCR Primer: SIK2 (h)-PR: sc-44364-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.