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STK36 siRNA (m): sc-153900

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. STK36 (serine/threonine-protein kinase 36), also known as fused homolog (FU), is a 1,315 amino acid protein that contains one protein kinase domain and belongs to the protein kinase superfamily and Ser/Thr protein kinase family. Localizing to nucleus and cytoplasm, STK36 is expressed at high levels in germ cells of adult testis, and at low levels in fetal tissues and adult ovaries. Utilizing magnesium as a cofactor, STK36 may play a role in Desert, Sonic and Indian Hedgehog signaling pathways, and may be of use as a potential treatment of Hedgehog-dependent cancers. STK36 exists as two alternatively spliced isoforms.

REFERENCES

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4. Daoud, F. and Blanchet-Tournier, M.F. 2005. Expression of the human FUSED protein in *Drosophila*. *Dev. Genes Evol.* 215: 230-237.
5. Katoh, Y. and Katoh, M. 2006. WNT antagonist, SFRP1, is Hedgehog signaling target. *Int. J. Mol. Med.* 17: 171-175.
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7. Maloveryan, A., et al. 2007. A possible role of mouse Fused (STK36) in Hedgehog signaling and Gli transcription factor regulation. *J. Cell Commun. Signal.* 1: 165-173.
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CHROMOSOMAL LOCATION

Genetic locus: Stk36 (mouse) mapping to 1 C3.

PRODUCT

STK36 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 STK36 shRNA Plasmid (m): sc-153900-SH and STK36 shRNA (m) Lentiviral Particles: sc-153900-V as alternate gene silencing products.

For independent verification of STK36 (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-153900A, sc-153900B and sc-153900C.

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

STK36 siRNA (m) is recommended for the inhibition of STK36 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 STK36 gene expression knockdown using RT-PCR Primer: STK36 (m)-PR: sc-153900-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.