SANTA CRUZ BIOTECHNOLOGY, INC.

STK16 siRNA (m): sc-153894

BACKGROUND

The phosphorylation of proteins by protein kinases and protein phosphatases is a key event in most nuclear and cytoplasmic processes. The ability to activate and deactivate proteins via phosphorylation or dephosphorylation is important for cell division, cell differentiation, DNA repair and transcription. STK16 (serine/threonine kinase 16), also known as KRCT, MPSK, TSF1 or PKL12, is a 305 amino acid lipid-anchored membrane protein that belongs to the superfamily of serine/threonine protein kinases. Expressed ubiquitously at low levels, STK16 is a protein kinase that can catalytically phosphorylate both serine and threonine residues on a variety of proteins. STK16 functions in an ATP-dependent manner and contains one protein kinase domain. Overexpression of STK16 causes disorganization of the Golgi apparatus, suggesting an additional role for STK16 in the secretory pathway. Human STK16 shares 94% sequence identity with its mouse counterpart, indicating a conserved function between species.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Stk16 (mouse) mapping to 1 C3.

PRODUCT

STK16 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 STK16 shRNA Plasmid (m): sc-153894-SH and STK16 shRNA (m) Lentiviral Particles: sc-153894-V as alternate gene silencing products.

For independent verification of STK16 (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-153894A, sc-153894B and sc-153894C.

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

STK16 siRNA (m) is recommended for the inhibition of STK16 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 STK16 gene expression knockdown using RT-PCR Primer: STK16 (m)-PR: sc-153894-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.