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SANTA CRUZ BIOTECHNOLOGY, INC.

MAK siRNA (m): sc-149234

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. MAK (male germ cell-associated kinase) is a 623 amino acid member of the Ser/Thr protein kinase family. Expressed predominantly in testicular germ cells, MAK contains one protein kinase domain and is believed to play an important role in spermatogenesis, as it is involved in the regulation of cell cycle and cell fate. MAK is a homolog of the *S. cerevisiae* protein Ime2, a meiosis-specific protein kinase that is required for the initiation of meiosis and spore formation. MAK expression is induced by androgen and MAK physically associates with AR (androgen receptor), functioning as a co-activator. The knockdown of MAK expression results in diminished expression of AR-responsive genes and inhibition of androgen-induced growth.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: Mak (mouse) mapping to 13 A3.3.

PRODUCT

MAK 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 MAK shRNA Plasmid (m): sc-149234-SH and MAK shRNA (m) Lentiviral Particles: sc-149234-V as alternate gene silencing products.

For independent verification of MAK (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-149234A, sc-149234B and sc-149234C.

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

MAK siRNA (m) is recommended for the inhibition of MAK 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 MAK gene expression knockdown using RT-PCR Primer: MAK (m)-PR: sc-149234-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.

PROTOCOLS

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