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SANTA CRUZ BIOTECHNOLOGY, INC.

LSG1 siRNA (m): sc-149130

BACKGROUND

LSG1 (large subunit GTPase 1) is a 658 amino acid GTPase that shuttles between nuclear Cajal bodies and the endoplasmic reticulum. LSG1 is required for CRM1-mediated nuclear export of the 60S ribosomal subunit. The yeast homolog of LSG1 is involved in ribosome biogenesis. Knockdown of the gene encoding LSG1 results in a rapid decrease in cell numbers and an increase in apoptotic cells, therefore it has been determined that LSG1 is essential for cell viability. LSG1 contains an N-terminal coiled-coil domain, a central MMR/HSG1 GTPase domain and a nuclear localization signal. The LSG1 gene maps to chromosome 3, which is made up of about 214 million bases and encodes over 1,100 genes. Particular regions of the chromosome 3 short arm are deleted in many types of cancer cells. Key tumor suppressing genes on chromosome 3 encode apoptosis mediator RASSF1, cell migration regulator HYAL1 and angiogenesis suppressor SEMA3B.

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CHROMOSOMAL LOCATION

Genetic locus: Lsg1 (mouse) mapping to 16 B2.

PROTOCOLS

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

PRODUCT

LSG1 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 LSG1 shRNA Plasmid (m): sc-149130-SH and LSG1 shRNA (m) Lentiviral Particles: sc-149130-V as alternate gene silencing products.

For independent verification of LSG1 (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-149130A, sc-149130B and sc-149130C.

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

LSG1 siRNA (m) is recommended for the inhibition of LSG1 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 LSG1 gene expression knockdown using RT-PCR Primer: LSG1 (m)-PR: sc-149130-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.