SANTA CRUZ BIOTECHNOLOGY, INC.

LAPSER1 siRNA (m): sc-62542

BACKGROUND

LAPSER1, also called Leucine zipper putative tumor suppressor 2, is a member of the LZTS family. Due to its deletion in multiple cancers, including prostate tumors, LAPSER1 is purported to be a tumor suppressor. In cancer cell lines, the overexpression of LAPSER1 can lead to growth inhibition and colony-forming efficiency. LAPSER1 is highly expressed in testis and prostate, but can be detected at lower levels in spleen, thymus, uterus, small intestine and colon. LAPSER1 colocalizes with γ-Tubulin, MKLP-1 and p80 katanin. LAPSER1 is involved in cytokinesis. The disruption of LAPSER1, which is accompanied by the mislocalization of p80 katanin, results in malformation of the central spindle. This is a potential impetus for carcinogenesis.

REFERENCES

1. Cabeza-Arvelaiz, Y., et al. 2001. LAPSER1:a novel candidate tumor suppressor gene from 10q24.3. Oncogene 20: 6707-6717.
2. Teufel, A., et al. 2005. In silico characterization of LZTS3, a potential tumor suppressor. Oncol. Rep. 14: 547-551.
3. Thyssen, G., et al. 2006. LZTS2 is a novel β-catenin-interacting protein and regulates the nuclear export of β-catenin. Mol. Cell. Biol. 26: 8857-8867.
4. Sudo, H. and Maru, Y. 2007. LAPSER1 is a putative cytokinetic tumor suppressor that shows the same centrosome and midbody subcellular localization pattern as p80 katanin. FASEB J. 21: 2086-2100.
5. Iida, M., et al. 2007. The putative tumor suppressor Tsc-22 is down-regulated early in chemically induced hepatocarcinogenesis and may be a suppressor of Gadd45b. Toxicol. Sci. 99: 43-50.

CHROMOSOMAL LOCATION

Genetic locus: Lzts2 (mouse) mapping to 19 C3.

PRODUCT

LAPSER1 siRNA (m) is a pool of 2 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 LAPSER1 shRNA Plasmid (m): sc-62542-SH and LAPSER1 shRNA (m) Lentiviral Particles: sc-62542-V as alternate gene silencing products.

For independent verification of LAPSER1 (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-62542A and sc-62542B.

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.

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

LAPSER1 siRNA (m) is recommended for the inhibition of LAPSER1 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.

GENE EXPRESSION MONITORING

LAPSER1 (D-7): sc-514618 is recommended as a control antibody for monitoring of LAPSER1 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor LAPSER1 gene expression knockdown using RT-PCR Primer: LAPSER1 (m)-PR: sc-62542-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.