

LAP1B siRNA (h): sc-88465

BACKGROUND

LAP1B (lamina associated polypeptide 1B), also known as TOR1AIP1 (torsin A interacting protein 1), is a 583 amino acid single-pass membrane protein that localizes to the nucleus. LAP1B interacts with to A- and B-type Lamins and may have a possible role in membrane attachment and assembly of the nuclear lamina. Phosphorylated upon DNA damage, LAP1B is encoded by a gene located on human chromosome 1q25.2, which is the largest human chromosome spanning about 260 million base pairs and making up 8% of the human genome. There are approximately 3,000 genes on chromosome 1, and considering the great number of genes there are also a large number of diseases associated with chromosome 1. Notably, the rare aging disease Hutchinson-Gilford progeria is associated with the LMNA gene which encodes Lamin A. When defective, the LMNA gene product can build up in the nucleus and cause characteristic nuclear blebs. The mechanism of rapidly enhanced aging is unclear and is a topic of continuing exploration.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: TOR1AIP1 (human) mapping to 1q25.2.

PROTOCOLS

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

PRODUCT

LAP1B siRNA (h) 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 LAP1B shRNA Plasmid (h): sc-88465-SH and LAP1B shRNA (h) Lentiviral Particles: sc-88465-V as alternate gene silencing products.

For independent verification of LAP1B (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-88465A, sc-88465B and sc-88465C.

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

LAP1B siRNA (h) is recommended for the inhibition of LAP1B expression in human 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 LAP1B gene expression knockdown using RT-PCR Primer: LAP1B (h)-PR: sc-88465-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.