



LDOC1 siRNA (m): sc-146694

BACKGROUND

LDOC1 (leucine zipper protein down-regulated in cancer cells) is a 146 amino acid nuclear protein encoded by the human gene LDOC1. This protein contains a leucine zipper-like motif and a proline-rich region that shares marked similarity with an SH3-binding domain. The protein localizes to the nucleus and is down-regulated in some cancer cell lines. It is thought to regulate the transcriptional response mediated by the nuclear factor κ B (NF κ B). The gene has been proposed as a tumor suppressor gene whose protein product may have an important role in the development and/or progression of some cancers.

REFERENCES

1. Nagasaki, K., Manabe, T., Hanzawa, H., Maass, N., Tsukada, T. and Yamaguchi, K. 1999. Identification of a novel gene, LDOC1, down-regulated in cancer cell lines. *Cancer Lett.* 140: 227-234.
2. Nagasaki, K., Schem, C., von Kaisenberg, C., Biallek, M., Rösel, F., Jonat, W. and Maass, N. 2003. Leucine-zipper protein, LDOC1, inhibits NF κ B activation and sensitizes pancreatic cancer cells to apoptosis. *Int. J. Cancer* 105: 454-458.
3. Chih, D.Y., Park, D.J., Gross, M., Idos, G., Vuong, P.T., Hiramata, T., Chumakov, A.M., Said, J. and Koeffler, H.P. 2004. Protein partners of C/EBP ϵ . *Exp. Hematol.* 32: 1173-1181.
4. Inoue, M., Takahashi, K., Niide, O., Shibata, M., Fukuzawa, M. and Ra, C. 2005. LDOC1, a novel MZF-1-interacting protein, induces apoptosis. *FEBS Lett.* 579: 604-608.
5. Baffoe-Bonnie, A.B., Smith, J.R., Stephan, D.A., Schleutker, J., Carpten, J.D., Kainu, T., Gillanders, E.M., Matikainen, M., Teslovich, T.M., Tammela, T., Sood, R., Balshem, A.M., Scarborough, S.D., Xu, J., Isaacs, W.B., et al. 2005. A major locus for hereditary prostate cancer in Finland: localization by linkage disequilibrium of a haplotype in the HPCX region. *Hum. Genet.* 117: 307-316.
6. Mizutani, K., Koike, D., Suetsugu, S. and Takenawa, T. 2005. WAVE3 functions as a negative regulator of LDOC1. *J. Biochem.* 138: 639-646.

CHROMOSOMAL LOCATION

Genetic locus: Ldoc1 (mouse) mapping to X A6.

PRODUCT

LDOC1 siRNA (m) is a target-specific 19-25 nt siRNA 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 LDOC1 shRNA Plasmid (m): sc-146694-SH and LDOC1 shRNA (m) Lentiviral Particles: sc-146694-V as alternate gene silencing products.

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 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

LDOC1 siRNA (m) is recommended for the inhibition of LDOC1 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 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 LDOC1 gene expression knockdown using RT-PCR Primer: LDOC1 (m)-PR: sc-146694-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.