



LZP siRNA (m): sc-149198

BACKGROUND

The epidermal growth factor (EGF) repeat-containing proteins constitute an expanding family of proteins that are involved in several cellular activities, such as blood coagulation, fibrinolysis, cell adhesion and neural and vertebrate development. LZP (liver-specific zona pellucida domain-containing protein), also known as OIT3 (oncoprotein-induced transcript 3 protein), is a 545 amino acid protein that localizes to the nuclear envelope and contains one ZP domain and one EGF-like domain. Expressed specifically in liver tissue, LZP is thought to be involved in hepatocellular function and development and is down-regulated in hepatocellular carcinoma, suggesting an additional role in tumor suppression. Multiple isoforms of LZP exist due to alternative splicing events.

REFERENCES

- Appella, E., Weber, I.T. and Blasi, F. 1988. Structure and function of epidermal growth factor-like regions in proteins. *FEBS Lett.* 231: 1-4.
- Xu, Z.G., Du, J.J., Zhang, X., Cheng, Z.H., Ma, Z.Z., Xiao, H.S., Yu, L., Wang, Z.Q., Li, Y.Y., Huo, K.K. and Han, Z.G. 2003. A novel liver-specific zona pellucida domain containing protein that is expressed rarely in hepatocellular carcinoma. *Hepatology* 38: 735-744.
- Xu, Z.G., Du, J.J., Cui, S.J., Wang, Z.Q., Huo, K.K., Li, Y.Y. and Han, Z.G. 2004. Identification of LZP gene from *Mus musculus* and *Rattus norvegicus* coding for a novel liver-specific ZP domain-containing secretory protein. *DNA Seq.* 15: 81-87.
- Yang, H., Wu, C., Zhao, S. and Guo, J. 2004. Identification and characterization of D8C, a novel domain present in liver-specific LZP, uromodulin and glycoprotein 2, mutated in familial juvenile hyperuricaemic nephropathy. *FEBS Lett.* 578: 236-238.
- Tan, M.G., Ooi, L.L., Aw, S.E. and Hui, K.M. 2004. Cloning and identification of hepatocellular carcinoma down-regulated mitochondrial carrier protein, a novel liver-specific uncoupling protein. *J. Biol. Chem.* 279: 45235-45244.
- Online Mendelian Inheritance in Man, OMIM™. 2005. Johns Hopkins University, Baltimore, MD. MIM Number: 609330. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Shen, H.L., Xu, Z.G., Huang, L.Y., Liu, D., Lin, D.H., Cao, J.B., Zhang, X., Wang, Z.Q., Wang, W.H., Yang, P.Y. and Han, Z.G. 2009. Liver-specific ZP domain-containing protein (LZP) as a new partner of Tamm-Horsfall protein harbors on renal tubules. *Mol. Cell. Biochem.* 321: 73-83.

CHROMOSOMAL LOCATION

Genetic locus: Oit3 (mouse) mapping to 10 B4.

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.

PRODUCT

LZP 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see LZP shRNA Plasmid (m): sc-149198-SH and LZP shRNA (m) Lentiviral Particles: sc-149198-V as alternate gene silencing products.

For independent verification of LZP (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-149198A, sc-149198B and sc-149198C.

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

LZP siRNA (m) is recommended for the inhibition of LZP 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 LZP gene expression knockdown using RT-PCR Primer: LZP (m)-PR: sc-149198-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.