



ZFPL1 siRNA (m): sc-155597

BACKGROUND

Zinc finger protein-like 1 (ZFPL1), also known as zinc finger protein MCG4, is a 310 amino acid single-pass membrane protein with two zinc fingers at the N-terminus, the second of which is likely a RING domain. The RING domain, which is a 40-60 amino acid, cysteine-rich domain that binds two atoms of zinc, plays a key role in the ubiquitination pathway. The presence of zinc finger-like and leucine zipper-like domains in ZFPL1 suggests a role in DNA binding and transcriptional regulation. ZFP1 is widely expressed in the golgi apparatus and is involved in maintaining golgi structure and regulating the rate of cargo transport.

REFERENCES

1. Thiesen, H.J. 1990. Multiple genes encoding zinc finger domains are expressed in human T cells. *New Biol.* 2: 363-374.
2. Abrink, M., Aveskogh, M. and Hellman, L. 1995. Isolation of cDNA clones for 42 different Krüppel-related zinc finger proteins expressed in the human monoblast cell line U-937. *DNA Cell Biol.* 14: 125-136.
3. Guru, S.C., Agarwal, S.K., Manickam, P., Olufemi, S.E., Crabtree, J.S., Weisemann, J.M., Kester, M.B., Kim, Y.S., Wang, Y., Emmert-Buck, M.R., Liotta, L.A., Spiegel, A.M., Boguski, M.S., Roe, B.A., Collins, F.S., et al. 1997. A transcript map for the 2.8-Mb region containing the multiple endocrine neoplasia type 1 locus. *Genome Res.* 7: 725-735.
4. Höppener, J.W., De Wit, M.J., Simarro-Doorten, A.Y., Roijers, J.F., van Herrewaarden, H.M., Lips, C.J., Parente, F., Quincey, D., Gaudray, P., Khodaei, S., Weber, G., Teh, B., Farnébo, F., Larsson, C., Zhang, C.X., et al. 1998. A putative human zinc-finger gene (ZFPL1) on 11q13, highly conserved in the mouse and expressed in exocrine pancreas. The European Consortium on MEN 1. *Genomics* 50: 251-259.
5. Chiu, C.F., Ghanekar, Y., Frost, L., Diao, A., Morrison, D., McKenzie, E. and Lowe, M. 2008. ZFPL1, a novel ring finger protein required for *cis*-Golgi integrity and efficient ER-to-Golgi transport. *EMBO J.* 27: 934-947.
6. Scheper, J., Oliva, B., Villà-Freixa, J. and Thomson, T.M. 2008. Analysis of electrostatic contributions to the selectivity of interactions between RING-finger domains and ubiquitin-conjugating enzymes. *Proteins* 74: 92-103.

CHROMOSOMAL LOCATION

Genetic locus: Zfp11 (mouse) mapping to 19 A.

PRODUCT

ZFPL1 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 ZFPL1 shRNA Plasmid (m): sc-155597-SH and ZFPL1 shRNA (m) Lentiviral Particles: sc-155597-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

ZFPL1 siRNA (m) is recommended for the inhibition of ZFPL1 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 ZFPL1 gene expression knockdown using RT-PCR Primer: ZFPL1 (m)-PR: sc-155597-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.