

ZNF740 siRNA (m): sc-155787

BACKGROUND

Zinc-finger proteins contain DNA-binding domains and have a wide variety of functions, most of which encompass some form of transcriptional activation or repression. The majority of zinc-finger proteins contain a Krüppel-type DNA binding domain and a KRAB domain, which is thought to interact with KAP1, thereby recruiting histone modifying proteins. ZNF740 (zinc finger protein 740) is a 193 amino acid protein that localizes to the nucleus and contains three C₂H₂-type zinc fingers. One of several members of the Krüppel C₂H₂-type zinc-finger protein family, ZNF740 is thought to play a role in transcriptional regulation. The gene encoding ZNF740 maps to human chromosome 12q13.13, which houses over 1,100 genes and comprises approximately 4.5% of the human genome.

REFERENCES

- Thiesen, H.J. 1990. Multiple genes encoding zinc finger domains are expressed in human T cells. *New Biol.* 2: 363-374.
- Rousseau-Merck, M.F., Hillion, J., Jonveaux, P., Couillin, P., Seite, P., Thiesen, H.J. and Berger, R. 1993. Chromosomal localization of 9 KOX zinc finger genes: physical linkages suggest clustering of KOX genes on chromosomes 12, 16, and 19. *Hum. Genet.* 92: 583-587.
- Rosenfeld, R. and Margalit, H. 1993. Zinc fingers: conserved properties that can distinguish between spurious and actual DNA-binding motifs. *J. Biomol. Struct. Dyn.* 11: 557-570.
- Han, Z.G., Zhang, Q.H., Ye, M., Kan, L.X., Gu, B.W., He, K.L., Shi, S.L., Zhou, J., Fu, G., Mao, M., Chen, S.J., Yu, L. and Chen, Z. 1999. Molecular cloning of six novel Krüppel-like zinc finger genes from hematopoietic cells and identification of a novel transregulatory domain KRN. *J. Biol. Chem.* 274: 35741-35748.
- Liu, J. and Stormo, G.D. 2008. Context-dependent DNA recognition code for C₂H₂ zinc-finger transcription factors. *Bioinformatics* 24: 1850-1857.
- Wainwright, H. and Beighton, P. 2008. Visceral manifestations of hypochondrogenesis. *Virchows Arch.* 453: 203-207.
- Lo, F.S., Luo, J.D., Lee, Y.J., Shu, S.G., Kuo, M.T. and Chiou, C.C. 2009. High resolution melting analysis for mutation detection for PTPN11 gene: applications of this method for diagnosis of Noonan syndrome. *Clin. Chim. Acta* 409: 75-77.
- Benussi, D.G., Costa, P., Zollino, M., Murdolo, M., Petix, V., Carrozzi, M. and Pecile, V. 2009. Trisomy 12p and monosomy 4p: phenotype-genotype correlation. *Genet. Test. Mol. Biomarkers* 13: 199-204.

CHROMOSOMAL LOCATION

Genetic locus: Zfp740 (mouse) mapping to 15 F3.

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

ZNF740 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 ZNF740 shRNA Plasmid (m): sc-155787-SH and ZNF740 shRNA (m) Lentiviral Particles: sc-155787-V as alternate gene silencing 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

ZNF740 siRNA (m) is recommended for the inhibition of ZNF740 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 ZNF740 gene expression knockdown using RT-PCR Primer: ZNF740 (m)-PR: sc-155787-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.