SANTA CRUZ BIOTECHNOLOGY, INC.

HTF34 siRNA (h): sc-97575

BACKGROUND

Zinc finger proteins (ZFPs) bind nucleic acids and play an important role in the regulation of transcription. The human genome contains approximately 300-700 ZFP genes, many of which are classified as Krüppel-like due to their conserved 6-amino acid H/C links. Approximately one third of the ZFPs considered to be krüppel-like contain a conserved N-terminal, 75 amino acid motif called the Krüppel-associated box (KRAB), which is composed of 2 modules, designated the A and B box. HTF34, also known ZNF93 (zinc finger protein 93), ZNF505 or TF34, is a 620 amino acid protein that belongs to the Krüppel C_2H_2-type zinc-finger protein family. Localizing to the nucleus, HTF34 is expressed during embryonic development. HTF34 contains 17 C_2H_2-type zinc fingers and one KRAB domain and may be involved in transcriptional regulation. Existing as three alternatively spliced isoforms, the gene encoding HTF34 maps to human chromosome 19p12.

REFERENCES

1. Bellefroid, E.J., Poncelet, D.A., Lecocq, P.J., Revelant, O. and Martial, J.A. 1991. The evolutionarily conserved Krüppel-associated box domain defines a subfamily of eukaryotic multifingered proteins. Proc. Natl. Acad. Sci. USA 88: 3608-3612.
2. Bellefroid, E.J., Marine, J.C., Ried, T., Lecocq, P.J., Rivière, M., Amemiya, C., Poncelet, D.A., Coulie, P.G., de Jong, P. and Szpirer, C. 1993. Clustered organization of homologous KRAB zinc-finger genes with enhanced expression in human T lymphoid cells. EMBO J. 12: 1363-1374.
3. Grimwood, J., Gordon, L.A., Olsen, A., Terry, A., Schmutz, J., Lamerdin, J., Hellsten, U., Goodstein, D. and Couronne, O. 2004. The DNA sequence and biology of human chromosome 19. Nature 428: 529-535.
4. Duan, Z., Choy, E., Harmon, D., Yang, C., Ryu, K., Schwab, J., Mankin, H. and Hornicek, F.J. 2009. ZNF93 increases resistance to ET-743 (Trabectedin; Yondelis) and PM00104 (Zalypsis) in human cancer cell lines. PLoS ONE 4: e6967.
5. Rose, J.E., Behm, F.M., Drgon, T., Johnson, C. and Uhl, G.R. 2010. Personalized smoking cessation: interactions between nicotine dose, dependence and quit-success genotype score. Mol. Med. 16: 247-253.

CHROMOSOMAL LOCATION

Genetic locus: ZNF93 (human) mapping to 19p12.

PRODUCT

HTF34 siRNA (h) is a pool of 2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see HTF34 shRNA Plasmid (h): sc-97575-SH and HTF34 shRNA (h) Lentiviral Particles: sc-97575-V as alternate gene silencing products.

For independent verification of HTF34 (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-97575A and sc-97575B.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

HTF34 siRNA (h) is recommended for the inhibition of HTF34 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 µM in 66 µl. 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 HTF34 gene expression knockdown using RT-PCR Primer: HTF34 (h)-PR: sc-97575-PR (20 µl). 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.

PROTOCOLS

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