

ZNF354C siRNA (h): sc-91599

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. ZNF354C (zinc finger protein 354C), also known as KID3, is a 554 amino acid protein that localizes to the nucleus and contains one KRAB domain and 11 C₂H₂-type zinc fingers. Expressed in kidney and skeletal muscle, as well as in the developing brain, ZNF354C interacts with RUNX2 and functions as a transcriptional repressor that suppresses the osteogenic effects of RUNX2. ZNF354C is therefore thought to play a role in osteoblastic differentiation.

REFERENCES

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4. Gao, L., Sun, C., Qiu, H.L., Liu, H., Shao, H.J., Wang, J. and Li, W.X. 2004. Cloning and characterization of a novel human zinc finger gene, hKID3, from a C₂H₂-ZNF enriched human embryonic cDNA library. *Biochem. Biophys. Res. Commun.* 325: 1145-1152.
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7. Ding, G., Lorenz, P., Kreutzer, M., Li, Y. and Thiesen, H.J. 2009. SysZNF: the C₂H₂ zinc finger gene database. *Nucleic Acids Res.* 37: D267-D273.

CHROMOSOMAL LOCATION

Genetic locus: ZNF354C (human) mapping to 5q35.3.

PRODUCT

ZNF354C siRNA (h) 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 ZNF354C shRNA Plasmid (h): sc-91599-SH and ZNF354C shRNA (h) Lentiviral Particles: sc-91599-V as alternate gene silencing products.

For independent verification of ZNF354C (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-91599A, sc-91599B and sc-91599C.

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

ZNF354C siRNA (h) is recommended for the inhibition of ZNF354C 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 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 ZNF354C gene expression knockdown using RT-PCR Primer: ZNF354C (h)-PR: sc-91599-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

SELECT PRODUCT CITATIONS

1. Xu, Y. and Sun, Z. 2017. Regulation of S-formylglutathione hydrolase by the anti-aging gene klotho. *Oncotarget* 8: 88259-88275.

RESEARCH USE

For research use only, not for use in diagnostic procedures.