

# ZDHHC7 siRNA (h): sc-93249

## 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. ZDHHC1 (zinc finger, DHHC-type containing 1), also known as ZNF377 (zinc finger protein 377) or C16orf1, is a 485 amino acid multi-pass membrane protein that contains one DHHC-type zinc finger. Expressed in fetal heart, lung and kidney and also present in adult lung and pancreas, ZDHHC1 functions as a palmitoyltransferase that catalyzes the conversion of palmitoyl-CoA and protein-cysteine to S-palmitoyl protein and CoA. Like ZDHHC1, ZDHHC5, ZDHHC6, ZDHHC7 and ZDHHC18 each contain one DHHC-type zinc finger through which they convey palmitoyltransferase activity against a broad range of substrates, including H-Ras, SNAP 25 and GABA<sub>A</sub> R proteins.

## REFERENCES

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- Chaudhary, J. and Skinner, M.K. 2002. Identification of a novel gene product, Sertoli cell gene with a zinc finger domain, that is important for FSH activation of testicular Sertoli cells. *Endocrinology* 143: 426-435.
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- Mitchell, D.A., et al. 2006. Protein palmitoylation by a family of DHHC protein S-acyltransferases. *J. Lipid Res.* 47: 1118-1127.
- González Montoro, A., et al. 2009. A novel motif at the C-terminus of palmitoyltransferases is essential for Swf1 and Pfa3 function *in vivo*. *Biochem. J.* 419: 301-308.
- Greaves, J., et al. 2009. The hydrophobic cysteine-rich domain of SNAP25 couples with downstream residues to mediate membrane interactions and recognition by DHHC palmitoyl transferases. *Mol. Biol. Cell* 20: 1845-1854.

## CHROMOSOMAL LOCATION

Genetic locus: ZDHHC7 (human) mapping to 16q24.1.

## PRODUCT

ZDHHC7 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZDHHC7 shRNA Plasmid (h): sc-93249-SH and ZDHHC7 shRNA (h) Lentiviral Particles: sc-93249-V as alternate gene silencing products.

For independent verification of ZDHHC7 (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-93249A, sc-93249B and sc-93249C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

ZDHHC7 siRNA (h) is recommended for the inhibition of ZDHHC7 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  $\mu$ M in 66  $\mu$ 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 ZDHHC7 gene expression knockdown using RT-PCR Primer: ZDHHC7 (h)-PR: sc-93249-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## SELECT PRODUCT CITATIONS

- Lu, D., et al. 2012. Phosphatidylinositol 4-kinase II $\alpha$  is palmitoylated by Golgi-localized palmitoyltransferases in cholesterol-dependent manner. *J. Biol. Chem.* 287: 21856-21865.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.