

ZDHHC15 siRNA (m): sc-155493

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. ZDHHC15 (zinc finger, DHHC-type containing 15), also known as MRX91, is a 337 amino acid multi-pass membrane protein that contains one DHHC-type zinc finger. Expressed in kidney, placenta, brain, heart, liver and lung, ZDHHC15 functions as a palmitoyltransferase that, via its DHHC domain, catalyzes the conversion of palmitoyl-CoA and a protein-cysteine to S-palmitoyl protein and CoA. Defects in the gene encoding ZDHHC15 are the cause of mental retardation X-linked type 91, a form of mental retardation that is characterized by impairments in adapted behavior that manifest during development. Multiple isoforms of ZDHHC15 exist due to alternative splicing events.

REFERENCES

1. Putilina, T., et al. 1999. The DHHC domain: a new highly conserved cysteine-rich motif. *Mol. Cell. Biochem.* 195: 219-226.
2. Linder, M.E., et al. 2004. Model organisms lead the way to protein palmitoyltransferases. *J. Cell Sci.* 117: 521-526.
3. Mansouri, M.R., et al. 2005. Loss of ZDHHC15 expression in a woman with a balanced translocation t(X;15)(q13.3;cen) and severe mental retardation. *Eur. J. Hum. Genet.* 13: 970-977.
4. Mitchell, D.A., et al. 2006. Protein palmitoylation by a family of DHHC protein S-acyltransferases. *J. Lipid Res.* 47: 1118-1127.
5. Online Mendelian Inheritance in Man, OMIM™. 2006. Johns Hopkins University, Baltimore, MD. MIM Number: 300576. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: *Zdhhc15* (mouse) mapping to X D.

PRODUCT

ZDHHC15 siRNA (m) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ZDHHC15 shRNA Plasmid (m): sc-155493-SH and ZDHHC15 shRNA (m) Lentiviral Particles: sc-155493-V as alternate gene silencing products.

For independent verification of ZDHHC15 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-155493A and sc-155493B.

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.

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

ZDHHC15 siRNA (m) is recommended for the inhibition of ZDHHC15 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 ZDHHC15 gene expression knockdown using RT-PCR Primer: ZDHHC15 (m)-PR: sc-155493-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.