

ZMYM3 siRNA (h): sc-91199

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. ZMYM3 (zinc finger MYM-type protein 3), also known as ZNF261 (zinc finger protein 261), XFIM, DXS6673E or MYM, is a 1,370 amino acid nuclear protein that contains nine MYM-type zinc fingers. Expressed in a variety of tissues, including heart, muscle and brain, ZMYM3 is thought to function as part of a histone deacetylase-containing complex that contains other proteins, such as HDAC1 and HDAC2, and may play a role in gene silencing through the modification of chromatin structure. Defects in the gene encoding ZMYM3 that lead to chromosomal translocations may be a cause of X-linked mental retardation. Two isoforms of ZMYM3 exist due to alternative splicing events.

REFERENCES

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4. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 300061. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Beever, C., Lai, B.P., Baldry, S.E., Peñaherrera, M.S., Jiang, R., Robinson, W.P. and Brown, C.J. 2003. Methylation of ZNF261 as an assay for determining X chromosome inactivation patterns. *Am. J. Med. Genet. A* 120A: 439-441.
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CHROMOSOMAL LOCATION

Genetic locus: ZMYM3 (human) mapping to Xq13.1.

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

ZMYM3 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 ZMYM3 shRNA Plasmid (h): sc-91199-SH and ZMYM3 shRNA (h) Lentiviral Particles: sc-91199-V as alternate gene silencing products.

For independent verification of ZMYM3 (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-91199A, sc-91199B and sc-91199C.

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

ZMYM3 siRNA (h) is recommended for the inhibition of ZMYM3 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 ZMYM3 gene expression knockdown using RT-PCR Primer: ZMYM3 (h)-PR: sc-91199-PR (20 μ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.