

ZFR siRNA (h): sc-91637

BACKGROUND

ZFR (zinc finger RNA-binding protein), also known as M-phase phosphoprotein homolog, is 1,074 amino acid RNA-binding protein. In human, ZFR is expressed in lung, liver, lymphocytes, heart, pancreas, kidney and placenta, and regulates postimplantation and gastrulation stages of development. Murine ZFR is observed in testis, ovary and brain. With elevated levels of expression during meiosis, ZFR associates with chromosome foci in meiotic cells. ZFR contains one DZF domain and localizes in the somatodendritic compartment of hippocampal neurons and colocalizes with STAU2 in cytosolic RNA granules. Knockout of ZFR in mouse embryo prevents the development of some embryonic structures leads to an increase in programmed cell death with a decrease in mitotic index.

REFERENCES

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2. Kleines, M., et al. 2001. Cloning and expression of the human single copy homologue of the mouse zinc finger protein zfr. *Gene* 275: 157-162.
3. Schmutz, J., et al. 2004. The DNA sequence and comparative analysis of human chromosome 5. *Nature* 431: 268-274.
4. Gerhard, D.S., et al. 2004. The status, quality, and expansion of the NIH full-length cDNA project: the Mammalian Gene Collection (MGC). *Genome Res.* 14: 2121-2127.
5. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. *Nat. Genet.* 36: 40-45.
6. Choudhary, C., et al. 2009. Lysine acetylation targets protein complexes and co-regulates major cellular functions. *Science* 325: 834-840.
7. Gauci, S., et al. 2009. Lys-N and trypsin cover complementary parts of the phosphoproteome in a refined SCX-based approach. *Anal. Chem.* 81: 4493-4501.

CHROMOSOMAL LOCATION

Genetic locus: ZFR (human) mapping to 5p13.3.

PRODUCT

ZFR 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 ZFR shRNA Plasmid (h): sc-91637-SH and ZFR shRNA (h) Lentiviral Particles: sc-91637-V as alternate gene silencing products.

For independent verification of ZFR (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-91637A, sc-91637B and sc-91637C.

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

ZFR siRNA (h) is recommended for the inhibition of ZFR 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.

GENE EXPRESSION MONITORING

ZFR (B-8): sc-365743 is recommended as a control antibody for monitoring of ZFR gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor ZFR gene expression knockdown using RT-PCR Primer: ZFR (h)-PR: sc-91637-PR (20 μ l). 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.