SANTA CRUZ BIOTECHNOLOGY, INC.

MIZIP siRNA (h): sc-92879

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. MIZIP (MCH-R1-interacting zinc-finger protein), also known as ZMYND19 (zinc-finger MYND domain-containing protein 19), is a 227 amino acid protein that localizes to both the cytoplasm and to the cell membrane and contains one MYND-type zinc-finger. Expressed in stomach, brain, liver, testis, heart, kidney and skeletal muscle, MIZIP interacts with MCH-1R and is thought to regulate MCH-1R signaling. Human MIZIP shares 100% sequence identity with its mouse and rat counterparts, suggesting a conserved role between species. The gene encoding MIZIP maps to human chromosome 9, which houses over 900 genes and comprises nearly 4% of the human genome.

REFERENCES

1. Bächner, D., et al. 2002. MIZIP, a highly conserved, vertebrate specific melanin-concentrating hormone receptor 1 inter-acting zinc-finger protein. FEBS Lett. 526: 124-128.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 611424. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Humphray, S.J., et al. 2004. DNA sequence and analysis of human chromosome 9. Nature 429: 369-374.
4. Francke, F., et al. 2005. MYND domain specific interaction of the melanin-concentrating hormone receptor 1 interacting zinc-finger protein with α- and β-Tubulin. Biochem. Biophys. Res. Commun. 334: 1292-1298.
5. Francke, F., et al. 2005. Immunohistochemical distribution of MIZIP and its co-expression with the melanin-concentrating hormone receptor 1 in the adult rodent brain. Brain Res. Mol. Brain Res. 139: 31-41.

CHROMOSOMAL LOCATION

Genetic locus: ZMYND19 (human) mapping to 9q34.3.

PRODUCT

MIZIP 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see MIZIP shRNA Plasmid (h): sc-92879-SH and MIZIP shRNA (h) Lentiviral Particles: sc-92879-V as alternate gene silencing products.

For independent verification of MIZIP (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-92879A, sc-92879B and sc-92879C.

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 µl of the RNAse-free water provided. Resuspension of the siRNA duplex in 330 µl of RNAse-free water makes a 10 µM solution in a 10 µM Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

APPLICATIONS

MIZIP siRNA (h) is recommended for the inhibition of MIZIP 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 µM in 66 µl. 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

MIZIP (E-4): sc-398514 is recommended as a control antibody for monitoring of MIZIP 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-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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 MIZIP gene expression knockdown using RT-PCR Primer: MIZIP (h)-PR: sc-92879-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.