SANTA CRUZ BIOTECHNOLOGY, INC.

Myoneurin siRNA (h): sc-78263

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. Myoneurin, also known as MYNN, OSZF, SBBIZ1 or ZBTB31 (zinc finger and BTB domain-containing protein 31), is a 610 amino acid protein that belongs to the Krüppel C_2H_2-type zinc-finger family. Localized to the nucleus and expressed primarily in the neuromuscular system, Myoneurin is thought to be involved in a wide range of developmental events in muscle tissue. Upon nerve injury, Myoneurin expression is dysregulated, suggesting that Myoneurin functions only in normal developmental processes. Myoneurin contains one BTB (POZ) domain and eight CHH2-type zinc fingers through which it may convey DNA-binding activity. Due to alternative splicing events, Myoneurin exists as four isoforms within the cell.

REFERENCES

1. Alliel, P.M., et al. 2000. Myoneurin, a novel member of the BTB/POZ-zinc finger family highly expressed in human muscle. Biochem. Biophys. Res. Commun. 273: 385-391.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606042. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Aldous, E.W., et al. 2003. A molecular epidemiological study of avian paramyxovirus type 1 (Newcastle disease virus) isolates by phylogenetic analysis of a partial nucleotide sequence of the fusion protein gene. Avian Pathol. 32: 239-256.
4. Aldous, E.W., et al. 2004. A molecular epidemiological investigation of isolates of the variant avian paramyxovirus type 1 virus (PPMV-1) responsible for the 1978 to present panzootic in pigeons. Avian Pathol. 33: 258-269.
5. Cifuentes-Diaz, C., et al. 2004. Neuromuscular expression of the BTB/POZ and zinc finger protein myoneurin. Muscle Nerve 29: 59-65.
6. Nanjundan, M., et al. 2007. Amplification of MDS1/EVI1 and EVI1, located in the 3q26.2 amplicon, is associated with favorable patient prognosis in ovarian cancer. Cancer Res. 67: 3074-3084.

CHROMOSOMAL LOCATION

Genetic locus: MYNN (human) mapping to 3q26.2.

PRODUCT

Myoneurin 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 Myoneurin shRNA Plasmid (h): sc-78263-SH and Myoneurin shRNA (h) Lentiviral Particles: sc-78263-V as alternate gene silencing products.

For independent verification of Myoneurin (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-78263A, sc-78263B and sc-78263C.

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

Myoneurin siRNA (h) is recommended for the inhibition of Myoneurin 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

Myoneurin (JB-17): sc-101082 is recommended as a control antibody for monitoring of Myoneurin 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 Myoneurin gene expression knockdown using RT-PCR Primer: Myoneurin (h)-PR: sc-78263-PR (20 µl). 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.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.