SANTA CRUZ BIOTECHNOLOGY, INC.

SFRS17A siRNA (h): sc-91582

BACKGROUND

SFRS17A (splicing factor, arginine/serine-rich 17A), also known as XE7, 721P, XE7Y, CCDC133, CXYorf3 or DXYS155E, is a 695 amino acid protein that contains one RRM (RNA recognition motif) domain and localizes to nuclear speckles. Widely expressed with highest expression in lung, heart, brain, liver, kidney, pancreas, skeletal muscle, placenta and activated B-cells, SFRS17A is a subunit of the spliceosome and functions to regulate alternative splice site selection for a variety of mRNA precursors. SFRS17A can also function as a monomer that can interact with ZNF265 and SF2/ASF (both of which are involved in pre-mRNA splicing and transcriptional regulation) via its arg/ser-rich domain. Due to alternative splicing events, SFRS17A is expressed as three different isoforms.

REFERENCES

1. Ellison, J.W., Ramos, C., Yen, P.H. and Shapiro, L.J. 1992. Structure and expression of the human pseudoautosomal gene XE7. Hum. Mol. Genet. 1: 691-696.
2. Ellison, J., Passage, M., Yu, L.C., Yen, P., Mohandas, T.K. and Shapiro, L. 1992. Directed isolation of human genes that escape X inactivation. Somat. Cell Mol. Genet. 18: 259-268.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 312095. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Mangs, A.H., Speirs, H.J., Goy, C., Adams, D.J., Markus, M.A. and Morris, B.J. 2006. XE7: a novel splicing factor that interacts with ASF/SF2 and ZNF265. Nucleic Acids Res. 34: 4976-4986.
5. Mangs, A.H. and Morris, B.J. 2007. ZRANB2: Structural and functional insights into a novel splicing protein. Int. J. Biochem. Cell Biol. 40: 2353-2357.

CHROMOSOMAL LOCATION

Genetic locus: AKAP17A (human) mapping to Xp22.33/Yp11.31.

PRODUCT

SFRS17A 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 SFRS17A shRNA Plasmid (h): sc-91582-SH and SFRS17A shRNA (h) Lentiviral Particles: sc-91582-V as alternate gene silencing products.

For independent verification of SFRS17A (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-91582A, sc-91582B and sc-91582C.

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

SFRS17A siRNA (h) is recommended for the inhibition of SFRS17A 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

SFRS17A (FE-06): sc-101139 is recommended as a control antibody for monitoring of SFRS17A 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 SFRS17A gene expression knockdown using RT-PCR Primer: SFRS17A (h)-PR: sc-91582-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.