

Srrm2 siRNA (m): sc-153831

BACKGROUND

Serine/arginine repetitive matrix (Srrm) proteins are suggested to be part of the pre- and post-splicing multiprotein mRNP complexes. Srrm proteins bind to RNA and are considered to be involved in pre-mRNA processing events. Srrm proteins localize to the nuclear speckle and are phosphorylated upon DNA damage either by ATM or ATR. Srrm2 (serine/arginine repetitive matrix protein 2) is a 2,703 amino acid protein that belongs to the CWC21 family and is encoded by a gene located on mouse chromosome 17 A3.3. Srrm2 is a component of the active spliceosome, which is found in a pre-mRNA splicing complex with SRp75, SRp40, U1 snRNP 70, U2 snRNP A and SRm160. The human homolog of this protein, known as SRm300 (serine/arginine-rich splicing factor-related nuclear matrix protein of 300 kDa), is a 2,752 amino acid protein that is expressed in liver, placenta and white blood cells. SRm300 is encoded by a gene located on human chromosome 16p13.3. Srrm2 exists as three alternatively spliced isoforms.

REFERENCES

1. Yuryev, A., Patturajan, M., Litingtung, Y., Joshi, R.V., Gentile, C., Gebara, M. and Corden, J.L. 1996. The C-terminal domain of the largest subunit of RNA polymerase II interacts with a novel set of serine/arginine-rich proteins. *Proc. Natl. Acad. Sci. USA* 93: 6975-6980.
2. Bourquin, J.P., Stagljar, I., Meier, P., Moosmann, P., Silke, J., Baechli, T., Georgiev, O. and Schaffner, W. 1997. A serine/arginine-rich nuclear matrix cyclophilin interacts with the C-terminal domain of RNA polymerase II. *Nucleic Acids Res.* 25: 2055-2061.
3. Blencowe, B.J., Issner, R., Nickerson, J.A. and Sharp, P.A. 1998. A coactivator of pre-mRNA splicing. *Genes Dev.* 12: 996-1009.
4. Patturajan, M., Wei, X., Berezney, R. and Corden, J.L. 1998. A nuclear matrix protein interacts with the phosphorylated C-terminal domain of RNA polymerase II. *Mol. Cell. Biol.* 18: 2406-2415.
5. Matsuoka, S., Ballif, B.A., Smogorzewska, A., McDonald, E.R., Hurov, K.E., Luo, J., Bakalarski, C.E., Zhao, Z., Solimini, N., Lerenthal, Y., Shiloh, Y., Gygi, S.P. and Elledge, S.J. 2007. ATM and ATR substrate analysis reveals extensive protein networks responsive to DNA damage. *Science* 316: 1160-1166.

CHROMOSOMAL LOCATION

Genetic locus: Srrm2 (mouse) mapping to 17 A3.3.

PRODUCT

Srrm2 siRNA (m) is a target-specific 19-25 nt siRNA 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 Srrm2 shRNA Plasmid (m): sc-153831-SH and Srrm2 shRNA (m) Lentiviral Particles: sc-153831-V as alternate gene silencing products.

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

Srrm2 siRNA (m) is recommended for the inhibition of Srrm2 expression in mouse 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 Srrm2 gene expression knockdown using RT-PCR Primer: Srrm2 (m)-PR: sc-153831-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.