SANTA CRUZ BIOTECHNOLOGY, INC.

SNRNP48 siRNA (h): sc-95651

BACKGROUND

Small nuclear ribonucleoproteins, also known as snRNPs, combine with other proteins to form spliceosomes, a complex that catalyzes pre-mRNA splicing. There are two types of spliceosomes: U2 and U12. The U12-type spliceosome is comprised of the U11 and U12 snRNPs as well as the U4/U6.U5 tri-snRNP. U11 and U12 bind as a U11/U12 di-snRNP complex, which recognizes the 5' splice site of the pre-mRNA during the first steps of U12-type spliceosome formation. U11/U12 snRNPs contain several proteins, including seven that are unique to the U11/U12 snRNP. SNRNP48 (U11/U12 small nuclear ribonucleoprotein 48 kDa protein), also known as C6orf151, is a 339 amino acid nuclear protein that is a component of the U11/U12 snRNPs and is therefore likely involved in U12-type 5' splice site recognition. There are two isoforms of SNRNP48 that are produced as a result of alternative splicing events.

REFERENCES

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2. Golas, M.M., Sander, B., Will, C.L., Lührmann, R. and Stark, H. 2003. Molecular architecture of the multiprotein splicing factor SF3b. Science 300: 980-984.
3. Will, C.L., Schneider, C., Hossbach, M., Urlaub, H., Rauhut, R., Elbashir, S., Tuschl, T. and Lührmann, R. 2004. The human 18S U11/U12 snRNP contains a set of novel proteins not found in the U2-dependent spliceosome. RNA 10: 929-941.
4. Benecke, H., Lührmann, R. and Will, C.L. 2005. The U11/U12 snRNP 65K protein acts as a molecular bridge, binding the U12 snRNA and U11-59K protein. EMBO J. 24: 3057-3069.
5. Andreeva, A. and Tidow, H. 2008. A novel CHHC Zn-finger domain found in spliceosomal proteins and tRNA modifying enzymes. Bioinformatics 24: 2277-2280.
6. Turunen, J.J., Will, C.L., Grote, M., Lührmann, R. and Frilander, M.J. 2008. The U11-48K protein contacts the 5' splice site of U12-type introns and the U11-59K protein. Mol. Cell. Biol. 28: 3548-3560.
7. Tidow, H., Andreeva, A., Rutherford, T.J. and Fersht, A.R. 2009. Solution structure of the U11-48K CHHC zinc-finger domain that specifically binds the 5' splice site of U12-type introns. Structure 17: 294-302.

CHROMOSOMAL LOCATION

Genetic locus: SNRNP48 (human) mapping to 6p24.3.

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.

PRODUCT

SNRNP48 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 SNRNP48 shRNA Plasmid (h): sc-95651-SH and SNRNP48 shRNA (h) Lentiviral Particles: sc-95651-V as alternate gene silencing products.

For independent verification of SNRNP48 (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-95651A, sc-95651B and sc-95651C.

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

SNRNP48 siRNA (h) is recommended for the inhibition of SNRNP48 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.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor SNRNP48 gene expression knockdown using RT-PCR Primer: SNRNP48 (h)-PR: sc-95651-PR (20 µl). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.