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# U2 snRNP B'' siRNA (m): sc-154834

## 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 U2-type spliceosome is found in all eukaryotes and excises U2-type introns, which account for the majority of pre-mRNA introns. The U12-type spliceosome removes U12-type introns, which comprise less than 1% of all human introns. U2 snRNP B'' is a component of the U2 snRNP that forms a complex with U2 snRNP A (U2A). Together, U2 snRNP A and U2 snRNP B'' form a complex that binds to the U2 snRNA hairpin IV. The configuration of this U2 snRNP A/U2 snRNP B'' dimer and the subtle variations of a few key residues regulate the snRNP-RNA-binding specificity. Significantly, patients with lupus erythematosus produce antibodies that interact with snRNP proteins. U2 snRNP B'' is a 225 amino acid protein that contains two RRM (RNA recognition motif) domains.

## REFERENCES

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## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## CHROMOSOMAL LOCATION

Genetic locus: *Snrpb2* (mouse) mapping to 2 G1.

## PRODUCT

U2 snRNP B'' siRNA (m) 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see U2 snRNP B'' shRNA Plasmid (m): sc-154834-SH and U2 snRNP B'' shRNA (m) Lentiviral Particles: sc-154834-V as alternate gene silencing products.

For independent verification of U2 snRNP B'' (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-154834A, sc-154834B and sc-154834C.

## 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  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

## APPLICATIONS

U2 snRNP B'' siRNA (m) is recommended for the inhibition of U2 snRNP B'' 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  $\mu$ M in 66  $\mu$ 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 U2 snRNP B'' gene expression knockdown using RT-PCR Primer: U2 snRNP B'' (m)-PR: sc-154834-PR (20  $\mu$ 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.