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### SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# U2AF1L3 siRNA (m): sc-154835

## BACKGROUND

Pre-mRNA splicing involves the removal of intronic DNA from the primary transcript in order for the RNA to become biologically active. This process allows genes to produce multiple protein isoforms with diverse functions. To begin this process, protein auxiliary factors such as U2AF35 and U2AF65 bind to the 3' splice site of pre-mRNA to initiate splicing. U2AF1L3 (U2(RNU2) small nuclear RNA auxiliary factor 1-like protein 3), also known as U2 auxiliary factor 26 and U2AF1L4 (U2 small nuclear RNA auxiliary factor 1-like protein 4), is a 220 amino acid nuclear protein that shares similarity with U2AF35 and likely participates in pre-mRNA splicing events. There are three isoforms of U2AF1L3 that are produced as a result of alternative splicing events. Isoform 2 is widely expressed, while isoform 3 is highly expressed in lung, brain and heart.

## REFERENCES

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2. Faustino, N.A. and Cooper, T.A. 2003. Pre-mRNA splicing and human disease. *Genes Dev.* 17: 419-437.
3. Pacheco, T.R., Gomes, A.O., Barbosa-Morais, N.L., Benes, V., Ansorge, W., Wollerton, M., Smith, C.W., Valcárcel, J. and Carmo-Fonseca, M. 2004. Diversity of vertebrate splicing factor U2AF35: identification of alternatively spliced U2AF1 mRNAs. *J. Biol. Chem.* 279: 27039-27049.
4. Krämer, A., Ferfoglia, F., Huang, C.J., Mulhaupt, F., Nesic, D. and Tanackovic, G. 2005. Structure-function analysis of the U2 snRNP-associated splicing factor SF3a. *Biochem. Soc. Trans.* 33: 439-442.
5. Valadkhan, S. 2005. snRNAs as the catalysts of pre-mRNA splicing. *Curr. Opin. Chem. Biol.* 9: 603-608.
6. Chen, F., Ji, C., Dou, T., Zheng, N., Qiu, R., Peng, J., Fang, W., Feng, C., Xie, Y. and Mao, Y. 2006. Cloning and characterization of a novel splice variant of human U2AF1L3 gene. *DNA Seq.* 17: 282-286.
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## CHROMOSOMAL LOCATION

Genetic locus: U2af1l4 (mouse) mapping to 7 B1.

## PRODUCT

U2AF1L3 siRNA (m) is a pool of 2 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 U2AF1L3 shRNA Plasmid (m): sc-154835-SH and U2AF1L3 shRNA (m) Lentiviral Particles: sc-154835-V as alternate gene silencing products.

For independent verification of U2AF1L3 (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-154835A and sc-154835B.

## 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

U2AF1L3 siRNA (m) is recommended for the inhibition of U2AF1L3 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 U2AF1L3 gene expression knockdown using RT-PCR Primer: U2AF1L3 (m)-PR: sc-154835-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.

## PROTOCOLS

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