



# INTS1 siRNA (m): sc-146249

## BACKGROUND

RNA polymerase II (Pol II) is an enzyme that is composed of 12 subunits and is responsible for the transcription of protein-coding genes. Transcription initiation requires Pol II-mediated recruitment of transcription machinery to a target promoter, thereby allowing transcription to begin. The integrator complex is a multi-protein complex that associates with the C-terminal domain of Pol II and is involved in small nuclear RNA (snRNA) transcription and 3'-end processing. INTS1 (integrator complex subunit 1), also known as NET28, is a 2,190 amino acid single-pass membrane protein that belongs to the integrator subunit 1 family and is a subunit of the Integrator complex. This complex associates with the C-terminal domain of RNA polymerase II large subunit and mediates 3-prime end processing of small nuclear RNAs U1 and U2.

## REFERENCES

1. Uguen, P., et al. 2003. The 3' ends of human pre-snRNAs are produced by RNA polymerase II CTD-dependent RNA processing. *EMBO J.* 22: 4544-4554.
2. Jacobs, E.Y., et al. 2004. Role of the C-terminal domain of RNA polymerase II in U2 snRNA transcription and 3' processing. *Mol. Cell. Biol.* 24: 846-855.
3. Baillat, D., et al. 2005. Integrator, a multiprotein mediator of small nuclear RNA processing, associates with the C-terminal repeat of RNA polymerase II. *Cell* 123: 265-276.
4. Egloff, S., et al. 2007. Serine-7 of the RNA polymerase II CTD is specifically required for snRNA gene expression. *Science* 318: 1777-1779.
5. Inagaki, Y., et al. 2008. CREB3L4, INTS3, and SNAPAP are targets for the 1q21 amplicon frequently detected in hepatocellular carcinoma. *Cancer Genet. Cytogenet.* 180: 30-36.
6. Richard, D.J., et al. 2008. Single-stranded DNA-binding protein hSSB1 is critical for genomic stability. *Nature* 453: 677-681.
7. Li, Y., et al. 2009. HSSB1 and hSSB2 form similar multiprotein complexes that participate in DNA damage response. *J. Biol. Chem.* 284: 23525-23531.

## CHROMOSOMAL LOCATION

Genetic locus: Ints1 (mouse) mapping to 5 G2.

## PRODUCT

INTS1 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 INTS1 shRNA Plasmid (m): sc-146249-SH and INTS1 shRNA (m) Lentiviral Particles: sc-146249-V as alternate gene silencing products.

For independent verification of INTS1 (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-146249A, sc-146249B and sc-146249C.

## PROTOCOLS

See our web site at [www.scbt.com](http://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  $\mu$ 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

INTS1 siRNA (m) is recommended for the inhibition of INTS1 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 INTS1 gene expression knockdown using RT-PCR Primer: INTS1 (m)-PR: sc-146249-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.