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## Lieferung & Zahlungsart

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## Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
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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

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

# Rpp29 siRNA (m): sc-153113

## BACKGROUND

Ribonuclease P (PNase P) and Ribonuclease MRP (RNase MRP) are small nuclear ribonucleoproteins (snRNPs) that act on RNA substrates *in vitro*. RNase P and RNase MRP, which accumulate in the nucleolus, have a similar RNA component and also have several protein subunits in common. RNase P, which consists of a complex of an RNA species (H1 RNA), POP1 (processing of precursor 1), POP5 (processing of precursor 5), and at least 7 Rpps (including Rpp14, Rpp29, Rpp30 and Rpp38), removes the 5' leader sequences from precursor tRNA molecules. In particular, the nucleolar-localizing RNase P catalyzes the hydrolysis of a specific phosphodiester bond in precursor tRNA to form the mature 5' end of tRNA. The structurally related RNase MRP plays an essential role in the formation of the 5' end of 5.8S rRNA. Both RNase P and RNase MRP are associated with Th/To ribonucleoproteins; Rpp30 and Rpp38 have specifically been implicated as Th autoantigens which contribute to the autoimmune disease systemic sclerosis.

## REFERENCES


1. Karwan, R. 1993. RNase MRP/RNase P: a structure-function relation conserved in evolution? FEBS Lett. 319: 1-4.
2. Jarrous, N., Eder, P.S., Guerrier-Takada, C., Hoog, C. and Altman, S. 1998. Autoantigenic properties of some protein subunits of catalytically active complexes of human ribonuclease P. RNA 4: 407-417.
3. Pluk, H., van Eenennaam, H., Rutjes, S.A., Pruijn, G.J. and van Venrooij, W.J. 1999. RNA-protein interactions in the human RNase MRP ribonucleoprotein complex. RNA 5: 512-524.
4. Altman, S. 2000. The road to RNase P. Nat. Struct. Biol. 7: 827-828.
5. Kurz, J.C. and Fierke, C.A. 2000. Ribonuclease P: a ribonucleoprotein enzyme. Curr. Opin. Chem. Biol. 4: 553-558.
6. van Eenennaam, H., Jarrous, N., van Venrooij, W.J. and Pruijn, G.J. 2000. Architecture and function of the human endonucleases RNase P and RNase MRP. IUBMB Life 49: 265-272.
7. van Eenennaam, H., van der Heijden, A., Janssen, R.J., van Venrooij, W.J. and Pruijn, G.J. 2001. Basic domains target protein subunits of the RNase MRP complex to the nucleolus independently of complex association. Mol. Biol. Cell 12: 3680-3689.


## CHROMOSOMAL LOCATION

Genetic locus: Pop4 (mouse) mapping to 7 B2.

## PRODUCT

Rpp29 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see Rpp29 shRNA Plasmid (m): sc-153113-SH and Rpp29 shRNA (m) Lentiviral Particles: sc-153113-V as alternate gene silencing products.

For independent verification of Rpp29 (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-153113A, sc-153113B and sc-153113C.

## 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

Rpp29 siRNA (m) is recommended for the inhibition of Rpp29 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 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 Rpp29 gene expression knockdown using RT-PCR Primer: Rpp29 (m)-PR: sc-153113-PR (20 µl). 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 for detailed protocols and support products.