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# RNF24 siRNA (m): sc-153043

## BACKGROUND

The RING-type zinc finger motif is present in a number of viral and eukaryotic proteins and is made of a conserved cysteine-rich domain that is able to bind two zinc atoms. Proteins that contain this conserved domain are generally involved in the ubiquitination pathway of protein degradation. RNF24 (RING finger protein 24), also known as Goliath-like protein (C3CH4 type) or G1L, is a single-pass membrane protein found in the Golgi apparatus, consisting of 148 amino acids. RNF24 causes intracellular retention of TRPCs, regulates insertion of TRPCs into the plasma membrane and interacts with TRPC1, TRPC3, TRPC4, TRPC5, TRPC6 and TRPC7. The RNF24 protein shares similarity with *Drosophila* Goliath protein and thus, may function as a transcription factor. Multiple transcript variants encoding different isoforms have been found for the RNF24 gene, which maps to human chromosome 20p13.

## REFERENCES

1. Borden, K.L. and Freemont, P.S. 1996. The RING finger domain: a recent example of a sequence-structure family. *Curr. Opin. Struct. Biol.* 6: 395-401.
2. Lorick, K.L., Jensen, J.P., Fang, S., Ong, A.M., Hatakeyama, S. and Weissman, A.M. 1999. RING fingers mediate ubiquitin-conjugating enzyme (E2)-dependent ubiquitination. *Proc. Natl. Acad. Sci. USA* 96: 11364-11369.
3. Lussier, M.P., Lepage, P.K., Bousquet, S.M. and Boulay, G. 2008. RNF24, a new TRPC interacting protein, causes the intracellular retention of TRPC. *Cell Calcium* 43: 432-443.
4. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2008. Johns Hopkins University, Baltimore, MD. MIM Number: 612489. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Cheong, S.C., Chandramouli, G.V., Saleh, A., Zain, R.B., Lau, S.H., Sivakumaren, S., Pathmanathan, R., Prime, S.S., Teo, S.H., Patel, V. and Gutkind, J.S. 2009. Gene expression in human oral squamous cell carcinoma is influenced by risk factor exposure. *Oral Oncol.* 45: 712-719.

## CHROMOSOMAL LOCATION

Genetic locus: Rnf24 (mouse) mapping to 2 F1.

## PRODUCT

RNF24 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 RNF24 shRNA Plasmid (m): sc-153043-SH and RNF24 shRNA (m) Lentiviral Particles: sc-153043-V as alternate gene silencing products.

For independent verification of RNF24 (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-153043A, sc-153043B and sc-153043C.

## 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

RNF24 siRNA (m) is recommended for the inhibition of RNF24 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 RNF24 gene expression knockdown using RT-PCR Primer: RNF24 (m)-PR: sc-153043-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.