

# Med9 siRNA (h): sc-94034

## BACKGROUND

In mammalian cells, transcription is regulated in part by high molecular weight co-activating complexes that mediate signals between transcriptional activators and RNA polymerase II (Pol II). The mediator complex is one such multi-protein structure that functions as a bridge between regulatory proteins and Pol II, thereby regulating Pol II-dependent transcription. Med9 (mediator complex subunit 9), also known as MED25, is a 146 amino acid nuclear protein and component of the mediator complex. Med9 directly interacts with Med4 and is encoded by a gene that maps to human chromosome 17p11.2. Chromosome 17 comprises over 2.5% of the human genome, encodes over 1,200 genes and is associated with two key tumor suppressor genes, namely, p53 and BRCA1.

## REFERENCES

1. Soussi, T., Dehouche, K. and Beroud, C. 2000. p53 website and analysis of p53 gene mutations in human cancer: forging a link between epidemiology and carcinogenesis. *Hum. Mutat.* 15: 105-113.
2. Piura, B., Rabinovich, A. and Yanai-Inbar, I. 2001. Three primary malignancies related to BRCA mutation successively occurring in a BRCA1 185delAG mutation carrier. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 97: 241-244.
3. Minamoto, T., Buschmann, T., Habelhah, H., Matusevich, E., Tahara, H., Boerresen-Dale, A.L., Harris, C., Sidransky, D. and Ronai, Z. 2001. Distinct pattern of p53 phosphorylation in human tumors. *Oncogene* 20: 3341-3347.
4. Tomomori-Sato, C., Sato, S., Parmely, T.J., Banks, C.A., Sorokina, I., Florens, L., Zybaylov, B., Washburn, M.P., Brower, C.S., Conaway, R.C. and Conaway, J.W. 2004. A mammalian mediator subunit that shares properties with *Saccharomyces cerevisiae* mediator subunit Cse2. *J. Biol. Chem.* 279: 5846-5851.
5. Sato, S., Tomomori-Sato, C., Parmely, T.J., Florens, L., Zybaylov, B., Swanson, S.K., Banks, C.A., Jin, J., Cai, Y., Washburn, M.P., Conaway, J.W. and Conaway, R.C. 2004. A set of consensus mammalian mediator subunits identified by multidimensional protein identification technology. *Mol. Cell* 14: 685-691.
6. Zhang, X., Krutchinsky, A., Fukuda, A., Chen, W., Yamamura, S., Chait, B.T. and Roeder, R.G. 2005. MED1/TRAP220 exists predominantly in a TRAP/Mediator subpopulation enriched in RNA polymerase II and is required for ER-mediated transcription. *Mol. Cell* 19: 89-100.
7. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2010. Johns Hopkins University, Baltimore, MD. MIM Number: 609878. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: MED9 (human) mapping to 17p11.2.

## PROTOCOLS

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

## PRODUCT

Med9 siRNA (h) 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 Med9 shRNA Plasmid (h): sc-94034-SH and Med9 shRNA (h) Lentiviral Particles: sc-94034-V as alternate gene silencing products.

For independent verification of Med9 (h) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-94034A, sc-94034B and sc-94034C.

## 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

Med9 siRNA (h) is recommended for the inhibition of Med9 expression in human 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 Med9 gene expression knockdown using RT-PCR Primer: Med9 (h)-PR: sc-94034-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.