

# TRIM27 siRNA (h): sc-61712

## BACKGROUND

TRIM27, also designated Ret finger protein (RFP), is a member of the tripartite motif family, which is characterized by a conserved RING finger, a B-box, and a coiled-coil domain (together designated RBCC). TRIM27 becomes oncogenic when its RBCC is fused with the tyrosine kinase domain of the RET protein. Normally, TRIM27 functions as a transcriptional repressor and associates with enhancer of polycomb (EPC1) and Mi-2 $\beta$ , a main component of the nucleosome remodeling and deacetylase (NuRD) complex. TRIM27 is expressed at specific stages of spermatogenesis and in various tissues and can be localized to either the cytoplasm or nucleus depending on the cell type.

## REFERENCES

1. Isomura, T., Tamiya-Koizumi, K., Suzuki, M., Yoshida, S., Taniguchi, M., Matsuyama, M., Ishigaki, T., Sakuma, S. and Takahashi, M. 1992. RFP is a DNA binding protein associated with the nuclear matrix. *Nucleic Acids Res.* 20: 5305-5310.
2. Cao, T., Borden, K.L., Freemont, P.S. and Etkin, L.D. 1997. Involvement of the Rfp tripartite motif in protein-protein interactions and subcellular distribution. *J. Cell Sci.* 110: 1563-1571.
3. Tezel, G., Nagasaka, T., Iwashashi, N., Asai, N., Iwashita, T., Sakata, K. and Takahashi, M. 2000. Different nuclear/cytoplasmic distributions of RET finger protein in different cell types. *Pathol. Int.* 49: 881-886.
4. Shimono, Y., Murakami, H., Hasegawa, Y. and Takahashi, M. 2001. RET finger protein is a transcriptional repressor and interacts with enhancer of polycomb that has dual transcriptional functions. *J. Biol. Chem.* 275: 39411-39419.
5. Harbers, M., Nomura, T., Ohno, S. and Ishii, S. 2001. Intracellular localization of the Ret finger protein depends on a functional nuclear export signal and protein kinase C activation. *J. Biol. Chem.* 276: 48596-48607.
6. Dho, S.H. and Kwon, K.S. 2003. The Ret finger protein induces apoptosis via its RING finger-B box-coiled-coil motif. *J. Biol. Chem.* 278: 31902-31908.
7. Matsuura, T., Shimono, Y., Kawai, K., Murakami, H., Urano, T., Niwa, Y., Goto, H. and Takahashi, M. 2005. PIAS proteins are involved in the SUMO-1 modification, intracellular translocation and transcriptional repressive activity of RET finger protein. *Exp. Cell Res.* 308: 65-77.
8. Zha, J., Han, K.J., Xu, L.G., He, W., Zhou, Q., Chen, D., Zhai, Z. and Shu, H.B. 2006. The Ret finger protein inhibits signaling mediated by the noncanonical and canonical I $\kappa$ B kinase family members. *J. Immunol.* 176: 1072-1080.

## CHROMOSOMAL LOCATION

Genetic locus: TRIM27 (human) mapping to 6p22.1.

## 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.

## PRODUCT

TRIM27 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 TRIM27 shRNA Plasmid (h): sc-61712-SH and TRIM27 shRNA (h) Lentiviral Particles: sc-61712-V as alternate gene silencing products.

For independent verification of TRIM27 (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-61712A, sc-61712B and sc-61712C.

## 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

TRIM27 siRNA (h) is recommended for the inhibition of TRIM27 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 TRIM27 gene expression knockdown using RT-PCR Primer: TRIM27 (h)-PR: sc-61712-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.