



## D54 siRNA (h): sc-77088

### BACKGROUND

The tumor protein D52 (TPD52) family consists of three members, TPD52, TPD52L1 (D53), and TPD52L2 (D54). These small coiled-coil motif bearing proteins interact in hetero- and homomeric fashion, and have been implicated in cell proliferation, apoptosis, and vesicle trafficking. The TPD52 gene maps to chromosome 8q12, and due to amplification, shows frequent overexpression in prostate and breast carcinomas. D54 is a 206 amino acid protein that is often co-expressed with TPD52 in the bone marrow of patients with ALL and AML, suggesting that it has the potential to play a role in malignancy. D54 interacts with MAL2, a member of the polarized machinery transport system that is required for transcytosis, a transporter pathway that is used to deliver membrane-bound cargo from perinuclear endosomes to the apical surface in a raft-dependent manner. There are three isoforms of D54 that are produced as a result of alternative splicing events.

### REFERENCES

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2. Byrne, J.A., et al. 1998. Identification of homo- and heteromeric interactions between members of the breast carcinoma-associated D52 protein family using the yeast two-hybrid system. *Oncogene* 16: 873-881.
3. Sathasivam, P., et al. 2001. The role of the coiled-coil motif in interactions mediated by TPD52. *Biochem. Biophys. Res. Commun.* 288: 56-61.
4. Wilson, S.H., et al. 2001. Identification of MAL2, a novel member of the mal proteolipid family, though interactions with TPD52-like proteins in the yeast two-hybrid system. *Genomics* 76: 81-88.
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6. Rubin, M.A., et al. 2004. Overexpression, amplification, and androgen regulation of TPD52 in prostate cancer. *Cancer* 64: 3814-3822.
7. Tiaci, E., et al. 2005. Tumor protein D52 (TPD52): a novel B cell/plasma-cell molecule with unique expression pattern and  $Ca^{2+}$ -dependent association with Annexin VI. *Blood* 105: 2812-2820.
8. Cao, Q., et al. 2006. A testis-specific and testis developmentally regulated tumor protein D52 (TPD52)-like protein TPD52L3/hD55 interacts with TPD52 family proteins. *Biochem. Biophys. Res. Commun.* 344: 798-806.
9. Barbaric, D., et al. 2006. Expression of tumor protein D52-like genes in childhood leukemia at diagnosis: clinical and sample considerations. *Leuk. Res.* 30: 1355-1363.

### CHROMOSOMAL LOCATION

Genetic locus: TPD52L2 (human) mapping to 20q13.33.

### PROTOCOLS

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

### PRODUCT

D54 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 D54 shRNA Plasmid (h): sc-77088-SH and D54 shRNA (h) Lentiviral Particles: sc-77088-V as alternate gene silencing products.

For independent verification of D54 (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-77088A, sc-77088B and sc-77088C.

### 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

D54 siRNA (h) is recommended for the inhibition of D54 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 D54 gene expression knockdown using RT-PCR Primer: D54 (h)-PR: sc-77088-PR (20  $\mu$ l, 504 bp). 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.