

# TRBP2 siRNA (m): sc-154622

## BACKGROUND

TRBP2, also known as TARBP2 (*trans*-activation-responsive (HIV-1) RNA binding protein 2), TRBP1 or TRBP, is a nuclear protein that contains three DRBM (double-stranded RNA-binding) domains. TRBP binds between the bulge and the loop of the HIV-1 TAR RNA regulatory element and activates HIV-1 gene expression in synergy with the viral Tat protein. The third DRBM motif in the C-terminus of human TRBP2 can interact with and inhibit PKR activity, thereby increasing HIV-1 long terminal repeat (LTR) expression. In addition, TRBP2 functions as a component of a Dicer-containing complex and associates with the catalytic subunit of the RNA-induced silencing complex (RISC), namely eIF2C2. TRBP2 is essential for Dicer stability and the proper assembly of RISC. This suggests that TRBP2, in association with Dicer, plays an important role in the processing of miRNAs (microRNAs).

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: Tarbp2 (mouse) mapping to 15 F3.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PRODUCT

TRBP2 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 TRBP2 shRNA Plasmid (m): sc-154622-SH and TRBP2 shRNA (m) Lentiviral Particles: sc-154622-V as alternate gene silencing products.

For independent verification of TRBP2 (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-154622A, sc-154622B and sc-154622C.

## 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

TRBP2 siRNA (m) is recommended for the inhibition of TRBP2 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 TRBP2 gene expression knockdown using RT-PCR Primer: TRBP2 (m)-PR: sc-154622-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

## PROTOCOLS

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