

# TRH-DE siRNA (m): sc-76729

## BACKGROUND

TRH-DE (thyrotropin-releasing hormone degrading enzyme), also known as PAP-II or PGPEP2, is a 1,024 amino acid single-pass type II membrane protein that belongs to the peptidase M1 family and is expressed predominately in brain. Existing as a disulfide-linked homodimer, TRH-DE uses zinc as a cofactor to catalyze the cleavage and subsequent inactivation of TRH. Human TRH-DE shares 96% sequence identity with its rat counterpart, suggesting a conserved role between species. The gene encoding TRH-DE maps to human chromosome 12q21.1, which encodes over 1,100 genes and comprises approximately 4.5% of the human genome. Chromosome 12 is associated with a variety of diseases and afflictions, including hypochondrogenesis, achondrogenesis, Kniest dysplasia, Noonan syndrome and Trisomy 12p, which causes facial developmental defects and seizure disorders.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: *Trhde* (mouse) mapping to 10 D2.

## 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

TRH-DE 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 TRH-DE shRNA Plasmid (m): sc-76729-SH and TRH-DE shRNA (m) Lentiviral Particles: sc-76729-V as alternate gene silencing products.

For independent verification of TRH-DE (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-76729A, sc-76729B and sc-76729C.

## 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

TRH-DE siRNA (m) is recommended for the inhibition of TRH-DE 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 TRH-DE gene expression knockdown using RT-PCR Primer: TRH-DE (m)-PR: sc-76729-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.