

# GPSN2 siRNA (m): sc-145745

## BACKGROUND

GPSN2 (glycoprotein, synaptic 2), also known as TER or SC2, is a 308 amino acid multi-pass membrane protein that localizes to the endoplasmic reticulum and belongs to the steroid 5- $\alpha$  reductase family. Expressed in a variety of tissues with highest expression in skeletal muscle, GPSN2 catalyzes the final step in the elongation of long and very long chain microsomal fatty acids, namely the reduction of *trans*-2,3-enoyl-CoA to saturated acyl-CoA. Human GPSN2 shares 95% sequence identity with its mouse counterpart, suggesting a conserved role between species. The gene encoding GPSN2 maps to human chromosome 19 and is expressed as multiple alternatively spliced isoforms. Chromosome 19, which consists of over 63 million bases, houses approximately 1,400 genes and is recognized for having the greatest gene density of the human chromosomes. It is the genetic home for a number of immunoglobulin (Ig) superfamily members, including the killer cell and leukocyte Ig-like receptors, a number of ICAMs, the CEACAM and PSG family and Fc receptors (FcRs).

## REFERENCES

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## PROTOCOLS

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

## CHROMOSOMAL LOCATION

Genetic locus: Tocr (mouse) mapping to 8 C2.

## PRODUCT

GPSN2 siRNA (m) is a pool of 2 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 GPSN2 shRNA Plasmid (m): sc-145745-SH and GPSN2 shRNA (m) Lentiviral Particles: sc-145745-V as alternate gene silencing products.

For independent verification of GPSN2 (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-145745A and sc-145745B.

## 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

GPSN2 siRNA (m) is recommended for the inhibition of GPSN2 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 GPSN2 gene expression knockdown using RT-PCR Primer: GPSN2 (m)-PR: sc-145745-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.