

# TRPC5 siRNA (*S. scrofa*): sc-270469

## BACKGROUND

Transient receptor potential (TRP) ion channels are a superfamily of six transmembrane segment-spanning, gated cation channels. TRP subtypes mediate store-operated  $Ca^{2+}$  entry, a process involving  $Ca^{2+}$  influx and replenishment of  $Ca^{2+}$  stores formerly emptied through the action of inositol 1,4,5-trisphosphate production and other  $Ca^{2+}$  mobilizing agents. TRP ion channels influence calcium-depletion-induced calcium influx processes in response to chemo-, mechano- and osmoregulatory events. Human TRP1 protein is a 793 amino acid cation channel that is expressed in fetal and adult brain and in adult heart, testis and ovary, where it may influence store-operated  $Ca^{2+}$  entry as a component of capacitative calcium entry (CCE) complexes. The brain-specific subunit TRP5 forms a nonselective cation channel with TRP1 in the hippocampus that is activated by  $G_q$ -coupled receptors, but not by depletion of intracellular  $Ca^{2+}$  stores. The gene encoding human TRP5 maps to chromosome Xp23, which also contains loci for nonsyndromic mental retardation and X-linked disorders.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: TRPC5 (*S. scrofa*) mapping to X.

## PRODUCT

TRPC5 siRNA (*S. scrofa*) 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 TRPC5 shRNA Plasmid (*S. scrofa*): sc-270469-SH and TRPC5 shRNA (*S. scrofa*) Lentiviral Particles: sc-270469-V as alternate gene silencing products.

For independent verification of TRPC5 (*S. scrofa*) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-270469A, sc-270469B and sc-270469C.

## STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at  $-20^{\circ}$  C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at  $-20^{\circ}$  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

TRPC5 siRNA (*S. scrofa*) is recommended for the inhibition of TRPC5 expression in *S. scrofa* 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 TRPC5 gene expression knockdown using RT-PCR Primer: TRPC5 (*S. scrofa*)-PR: sc-270469-PR (20  $\mu$ l). Annealing temperature for the primers should be 55-60 $^{\circ}$  C and the extension temperature should be 68-72 $^{\circ}$  C.

## 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.