

# SCRG1 siRNA (h): sc-89029

## BACKGROUND

SCRG1 (scrapie-responsive protein 1) is a 98 amino acid secreted protein that belongs to the SCRG1 family. The SCRG1 protein contains a 20-amino acid signal peptide, and is expressed abundantly in the central nervous system of human adult, but not at all in fetal brain. The protein is targeted to the Golgi apparatus and large dense-core vesicles/secretory granules in neurons. High levels of SCRG1 transcripts are also observed in testis and aorta. SCRG1 is associated with neurodegenerative changes observed in transmissible spongiform encephalopathies. It may play a role in host response to prion-associated infections. The SCRG1 protein may be partly included in the membrane or secreted by the cells due to its hydrophobic N-terminus. The human and mouse SCRG1 proteins share 83% sequence identity. The SCRG1 gene is conserved in chimpanzee, bovine, mouse, rat and chicken, and maps to human chromosome 4q34.1.

## 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: SCRG1 (human) mapping to 4q34.1.

## PRODUCT

SCRG1 siRNA (h) 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 SCRG1 shRNA Plasmid (h): sc-89029-SH and SCRG1 shRNA (h) Lentiviral Particles: sc-89029-V as alternate gene silencing products.

For independent verification of SCRG1 (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-89029A and sc-89029B.

## 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

SCRG1 siRNA (h) is recommended for the inhibition of SCRG1 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 SCRG1 gene expression knockdown using RT-PCR Primer: SCRG1 (h)-PR: sc-89029-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.