

# SLC35F1 siRNA (h): sc-95572

## BACKGROUND

SLC35F1 (solute carrier family 35, member F1) is a 408 amino acid multi-pass membrane protein that belongs to the SLC35F solute transporter family. Mainly expressed in brain, the SLC35F1 protein is also expressed in cardiac tissue, although its role in cardiac physiology is unknown. The SLC35F1 gene is conserved in chimpanzee, canine, mouse, rat, chicken, zebrafish, *C. elegans*, *M. grisea*, *A. thaliana* and rice, and maps to human chromosome 6q22.1. Making up nearly 6% of the human genome, chromosome 6 contains around 1,200 genes within 170 million base pairs of sequence. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer suggesting the presence of a cancer susceptibility locus. Porphyria cutanea tarda is associated with chromosome 6 through the HFE gene which, when mutated, predisposes an individual to developing this porphyria. Notably, the PARK2 gene, which is associated with Parkinson's disease, and the genes encoding the major histocompatibility complex proteins, which are key molecular components of the immune system and determine predisposition to rheumatic diseases, are also located on chromosome 6. Stickler syndrome, 21-hydroxylase deficiency and maple syrup urine disease are also associated with genes on chromosome 6. A bipolar disorder susceptibility locus has been identified on the q arm of chromosome 6.

## REFERENCES

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3. Park, E., et al. 2007. Modulation of parkin gene expression in noradrenergic neuronal cells. *Int. J. Dev. Neurosci.* 25: 491-497.
4. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. *Genes Chromosomes Cancer* 47: 159-164.
5. Nishimura, M., et al. 2009. Tissue-specific mRNA expression profiles of human solute carrier 35 transporters. *Drug Metab. Pharmacokinet.* 24: 91-99.
6. Vasan, R.S., et al. 2009. Genetic variants associated with cardiac structure and function: a meta-analysis and replication of genome-wide association data. *JAMA* 302: 168-178.
7. Oki, N.O., et al. 2011. Novel human genetic variants associated with extra-pulmonary tuberculosis: a pilot genome wide association study. *BMC Res. Notes* 4: 28.

## CHROMOSOMAL LOCATION

Genetic locus: SLC35F1 (human) mapping to 6q22.1.

## PROTOCOLS

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

## PRODUCT

SLC35F1 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 SLC35F1 shRNA Plasmid (h): sc-95572-SH and SLC35F1 shRNA (h) Lentiviral Particles: sc-95572-V as alternate gene silencing products.

For independent verification of SLC35F1 (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-95572A and sc-95572B.

## 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

SLC35F1 siRNA (h) is recommended for the inhibition of SLC35F1 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 SLC35F1 gene expression knockdown using RT-PCR Primer: SLC35F1 (h)-PR: sc-95572-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.